

CALIFORNIA STATE BOARD OF HEALTH MONTHLY BULLETIN



Comfort stations are being established at many gasoline filling stations along the highways of California. This is no small factor in the provision of better sanitation in the rural districts. The establishment of these conveniences should be encouraged throughout every part of the state.

**THE HEALTH OFFICER AND CHILD HYGIENE
HEALTH OFFICER AND NEEDY CHILD
TUBERCULOSIS AND MIGRATION**

NOVEMBER, 1921.

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CALIFORNIA STATE BOARD OF HEALTH

MONTHLY BULLETIN

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MONTHLY BULLETIN

CALIFORNIA STATE BOARD OF HEALTH

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SENT FREE, ON REQUEST, TO ANY CITIZEN OF CALIFORNIA

WALTER M. DICKIE, M. D., Secretary . . . Executive Officer
GUY P. JONES Editor

EDITORIAL.

The keen interest aroused by the dental hygiene movement brings to the division of dental hygiene many inquiries concerning unemployed hygienists from school dental clinics, institutions, organizations, and professional men.

Do You Want a Dental Hygienist? There are very few dental hygienists available in this state at the present time but applications are received from all parts of the United States from dental hygienists contemplating employment in California.

Because of the demands for dental hygienists the division of dental hygiene is establishing not only a register of all those seeking employment but also a list of institutions, schools, and individuals desiring her services. The following questions, answered clearly and fully, will place either the dental hygienists wishing employment or those seeking her services on our register.

1. Do you wish the services of a dental hygienist for full time or half time?
2. What salary basis do you offer? (Answer in detail.)
3. What hours?
4. What will the dental hygienist be expected to do?
 - A. If in school, institution, or organization:
 - (a) Full-time dental prophylaxis?
 - (b) Lectures and toothbrush drills?
 - (c) Assistant to the dentist?
 - B. If in private office:
 - (a) Dental laboratory work?
 - (b) Assistant to the dentist?
 - (c) Full-time prophylaxis on children or adults?

FOR THE DENTAL HYGIENIST.

1. Give full name.
2. Age.
3. Give home state and city.
4. From which school are you a graduate? Year?

5. Are you a high school graduate?
6. How much experience have you had in a dental office or school, prior to your training as a dental hygienist?
7. How much experience have you had since your graduation?
8. Name the states in which you are licensed.
9. Do you prefer employment in a private office, school, or an institution?
 - A. If in a private office:
 - (a) Do you wish to do full-time prophylaxis?
 - (b) Do you prefer children or adults or both?
 - (c) Are you willing to do laboratory work, assisting, bookkeeping and stenographic work?
 - B. If in school or institution:
 - (a) Do you wish to do full-time lecture work, or part-time prophylaxis and part-time lecture work?
10. What minimum salary will you accept?
11. Do you prefer work on a guaranteed salary basis and commission?
12. What other credentials and experience have you. (Answer in detail.)

THE RELATION OF THE HEALTH OFFICER TO CHILD HYGIENE.*

By ADELAIDE BROWN, M.D., San Francisco, Member California State Board of Health.

Health conservation is a long step from the ordinary concept of a health officer's duties—i.e., water supply, milk supply, nuisances abated and communicable diseases controlled.

Where any attempt to meet even this outlay of duties is made a laboratory service, both bacteriological and chemical, must be available. And yet, in the first demands on a health officer, child conservation comes to the front. Most adults take boiled milk—hence milk as a health menace covers infancy and childhood.

Gross dairy inspections means some advance over a standard of "visible dirt," but nothing gives a line on the real technique of milking and handling of milk in any way commensurate with bacterial studies on a milk supply.

A pasteurizing law which does not connect up with a laboratory control of the efficiency of pasteurization is *not* a contribution to public health.

Owning a pasteurizer is no warrant to the community that pasteurized milk is secured. Running the apparatus so as to maintain 145 degrees for 30 minutes is pasteurizing milk—and such milk to be Class A contains under 10,000 bacteria; Class B contains under 50,000 after pasteurization. Whether this is done or *not*, the bacteriological count alone can tell and any pasteurizing that is not standardized by a frequent bacterial check up is public health legislation falsified.

How many communities have bacteriological laboratory service for the health officer? Without such service the community pays the price!

The use of the words "Tuberculin tested milk" or "Cows tuberculin tested" and *undated* is again a false security. Available records of such tests should be in the office of the health officer.

Clean milk means lessened infant and child mortality and morbidity, and as a child hygiene asset all records must be definite and in the hands of the community and the health officer.

Spot maps of the presence of communicable diseases in the district, hung up near a post office, would save the spread of cases. Forewarned is forearmed.

The education of the tuberculous patient to prevent menacing the health of others, is best secured by a sojourn of the patient in a modern sanitarium. If not possible, the health of the other members of the family, the examination of close contacts makes for better community health, by lessening the invasion of the disease. Only by many visits, occasionally by the health officer and regularly by the public health nurse can the steady good routine of care be preserved for these cases. A program outlined and never checked up will be carelessly observed by patient and family. The children near a tuberculous parent are cruelly menaced, for intestinal and meningeal tuberculosis are fatal infections and most common to childhood. To quote Dr. Sachs of Chicago, "as the income of a family sinks the incidence of tuberculosis rises"—i.e., contacts in smaller quarters, less food with the decreased

*Read at Annual Conference of State, County and Municipal Health Officers, September 27-30, 1921, Santa Monica, California.

income makes for rapid invasion, so that as an antituberculosis measure for childhood, the new funds for the children of tuberculous patients distributed during the sickness of the patient will make for less incidence. If this distribution is so supervised as to secure better food to the children and isolation of the active case, either in a hospital or in a separate room, and constant public health nursing supervision, much can be expected in 20 years from it in reducing children's infections. And it is well established that it is in childhood that tuberculosis infections occur. In carrying out this law whatever *local* committees are formed should include the health officer.

Better birth registration is part of any child hygiene program. The Children's Year program put California on the map of birth registration. We found some counties where 27 per cent of children under one year were not registered and another which contains four colleges, numerous high schools, private schools and one normal school, with 17 per cent unregistered.

Doctors are remiss, but a vigorous notification, followed by an appeal, on second offense, to the State Board of Health would rectify matters, as also would the education of the parent on the *value* to the child of birth registration.

We all ride a hobby, and proper certification of stillbirths is mine. Why should a child living a moment have a "cause of death" required to be signed and a "contributing cause" as well and a stillborn child have neither required? "Stillborn" is certainly a blanket cause, which may mean birth traumatism, specific disease, toxæmia of the mother and congenital deformity and the many conditions causing weak or premature delivery, and a nonviable child.

It seems to me that, first, we should require, as a public health study, as careful a signing of a birth and death certificate for a stillborn as a living child; thus only shall we reach an explanation for a neo-natal mortality in first two weeks of 47 per cent of the deaths of the first year.

Secondly, if the luetic insane should be the source of family group study can we not easily, by instruction, study and opportunity for treatment, diminish the number of congenital syphilitic infections by tracing back stillborn and neo-natal deaths to their true causes?

The cooperation of every health officer with the Child Hygiene program of the state and the Bureau of Social Hygiene, as well as with the Department of Vital Statistics would quickly make correct certification and the followup of syphilis infections possible. The Wassermann taken on each pregnant woman would shed much light, but before that is accepted as routine, the problem offers this other method of attack.

The Bureau of Child Hygiene of the State Board of Health, now out of the stage of infancy and become a runabout, has examined over 6000 children under five years of age since its inception. A few were in institutions, but the great majority were examined with the mother present, the same doctor making all examinations and pointing out to each mother the conditions present and where corrections should be made. Such mothers, so started in an observation of childhood and its defects, are ready for the followup by the school physical educational program and the playground.

The dental hygienist has accompanied the Bureau on its tours and the rural counties are well versed in "how and why" we brush our teeth.

The "health centers" where babies may be weighed and advice as to feeding given them are popular in the larger centers of population. Los Angeles has some eighteen and pays, under its health department, a small sum to a group of physicians for attendance in these centers. Oakland and San Francisco have one physician who attends the city health centers, some ten in Oakland and four in San Francisco. In San Francisco, each medical school, three of the hospitals and a private agency which maintains four centers cover the city quite thoroughly.

The average attendance is 15 to 25 babies or runabouts over two years and both breast-fed and bottle babies are welcome. The period of weaning and the proper feeding of solids present the most need for teaching.

The health center with careful instruction on vaccination, the proper hygiene of the child, the home visit to each new baby by the nurse, gives a wonderful opportunity for education. Then, the visit to the center and meeting other young mothers stimulates each mother to do her best to carry out directions. It is *group psychology*, and it works. The type of mother varies with the district, but they all learn easily and keep to directions very well, and are regular attendants. Several mothers have brought their ninth child every two weeks for a year, and one mother remarked of her sixth: "It is the only baby I have ever enjoyed, the others were so sickly."

A health center needs a *doctor*, a nurse who makes the home visits and sees that diets, formulas, etc., are understood, and a clerical worker—have her young and, of course, a volunteer. The work is excellent training in social understanding. For furniture, two deal tables, a tape measure nailed on one, scales and writing space on the other, a record system and a blank book for the mother to have the baby's weight, formula and directions written for her. Wee red star three months' attendance, blue star six months and gold stars are given every three months to the breast-fed baby. *These stars also worked.* The mother with two gold stars is very proud of it. In all bottle-fed babies we ask why the child was weaned.

A health center without a doctor in attendance is not all it can be. Morale is attained by the right manning of the center. Problems of tuberculosis, weaning, working hours, widows' pension, abandoning by father or mother, the service the state, the county, the city gives the feeble-minded, the orphan, the abandoned child and now the child of the handicapped—all these problems come up and the physician is needed to adjust them. The health officer might find a constructive support in his community through the health center. There is no doubt that the child whose defects, under six years, have been corrected, whose diet has been guided from birth to six, will enter our public school system to go through unretarded and come out better equipped for citizenship. The education of the mother through the young child reaches the home more intimately and with less resistance than statements as to correctable defects sent home from school.

The last word for fundamental health principles for childhood lies in the nutrition class established for the 7 per cent and more under-weight child. Rest, fresh air and food are supervised. Better balanced meals are the need of the home. Meat takes the money milk and vegetables should have. To spend the same amount with better distribution in food values makes for better babies and childhood. Might it not also make the enforcement of the eighteenth amendment less difficult? Sugar, starch and alcohol are not very far apart, synthetically, and a diet balanced between carbohydrates, proteids, fat, and water-soluble vitamins, as expressed in green vegetables and fruits, is within reach of all and yet how many meals are fried meat and fried potato and coffee to child and adult alike?

The best cooperators with the health officer, on diet, are the home economics teacher in the high school, the farm bureau group in the counties. It is only line upon line, this lesson of food values can be learned and yet the necessity is appreciated in many ways. An agricultural expert, who had been in sugar in Java, told me that when he paid his men and gave no meals they bought ices, had no strength and put up a poor day's work. He instituted two meals a day in the fields and changed his sick list and output of work. He was superintendent of rice fields in California when I met him and he said the California agricultural worker demanded fresh green food, a salad or coleslaw, three or four times a week. If they got that any other palatable food went well—without the vitamins there was a steady growl.

So much of the community work is an outgrowth of health conditions, the dependency of childhood, a breakdown in the health of the adults, that we, as public health workers, can not be too alive to the constructive conservation of health. Statistics teach, surveys force our attention, but we achieve only as we follow up.

An increased intelligence makes for better health and the health officer must be a leader, centering in his office the health conservation activities of the community. Changing from police to educational attitude will change health standards and the vivid results will show in childhood. Given the public health nurse, laboratory facilities, adequate compensation for service rendered by the health officer, and his mind one that thinks public health all the time, and child hygiene will be developed to the highest terms through the community's valuation of health service.

THE FISH INDUSTRY OF SOUTHERN CALIFORNIA AND THE RELATION TO PUBLIC HEALTH.*

By NORMAN HENDRICKSON, San Pedro, National Cannermen's Association.

There are no doubt a number of you who are not as familiar with the fisheries of this state as you may wish to be. It occurred to me that you might prefer to hear something of the fisheries in general rather than a discourse confined to the relation of fish to public health.

Fish will probably demand more of your attention in the future than they have in the past, as it is practically certain that the fish industries of Southern California will soon undergo a considerable expansion and a change in business methods. Any statements I may make will be understood to apply only to Southern California as I have so far had no opportunity to study at close range the fisheries farther north. In fact practically all my attention for the past four years has been confined to the fish canneries in Los Angeles, Long Beach and San Diego.

There are a number of very good reasons for expecting an increase in the volume of fresh fish business. The climate is exceptionally favorable for fishing in comfort during the entire year. The waters here are relatively quiet and the fishermen are not subjected to the hardships due to storms and cold weather which are such a handicap to the New England fisheries.

There is an abundance of fish here which have not been utilized to anywhere the extent that they should be. There are some fish available during the entire year but some species require considerable effort for their capture. There are several varieties of very excellent food fish which are here in vast quantities and are very easy to capture for short periods every year. Chief among these is the barracuda. When the shoals of barracuda are here three or four purse seine boats can easily supply the markets with more than they can use. There are times when more than a thousand tons a day could be brought in if the facilities for handling them were provided. Mackerel, sea bass and yellowtail are extremely abundant at times, but there is no provision for taking care of any unusual quantities.

We usually think of the fish industries as in three divisions, the fresh fish business, canning, and otherwise preserving as salting, drying and smoking. The salting, drying and smoking in this locality does not amount to much. It looks as though it never would. There are comparatively few people nowadays who care to have any dried or salted fish around the house. They do not want to bother with it. It is not suitable for apartment house use.

The canning industry has developed with remarkable rapidity, especially the tuna canning. It will probably grow somewhat more when conditions are more settled but there does not seem to be much hope of a great increase in the catch of white meat tuna. Due to the stimulus of war time production there are now more canneries than are warranted by the supply of fish. A good many of them have been closed this entire season. The increase in the number of fishing boats and price of fish has not increased the supply. There may be an increase in the catch of bluefin tuna if the fishermen learn to catch the larger fish or if conditions become more favorable for bringing the fish up from

*Read at the Annual Conference of State, County and Municipal Health Officials, Santa Monica, September 27-30, 1921.

Mexican waters. There will probably be a very large increase in the canning of the large sardines as soon as a market can be developed for the product. They can be put on the market at less than twenty cents retail for a fifteen ounce can which will mean an excellent and very cheap food. The white meat tuna and quarter-oil sardines are very good but are not especially cheap.

The best opportunity for large increase is in the fresh fish business. There are fourteen wholesale markets in San Pedro doing about enough business for one of them. In general they buy fish from the fishermen in just sufficient quantities to fill their orders. When fish are scarce they pay a ridiculously high price. When fish are plentiful they buy their requirements at a lower price and can not accept the surplus at any price. This is the chief factor in limiting the business. It probably will not be remedied until cold storage is established on a good business and scientific basis. The consumption of fresh fish in Southern California, except in Long Beach, is extremely small. There is no doubt that this is due to the excessively high prices, the poor quality and the irregularity of both the supply and the price. The quality is gradually getting better but it is unreasonably slow about it. We believe that the trouble is chiefly at the source of supply—that is at San Pedro and San Diego. It is due largely to the character of the individuals engaged in the business. They are nearly all foreigners whose ideals of sanitation are not modern or American. They are conducting their business in the way their ancestors did and will not change rapidly until they are compelled to or are shown that it is decidedly to their advantage to do so. Most of them are not as particular about their food as Americans are. They prefer strongly flavored foods. They like strong smelling cheese, fermented milk, salt fish and spices. They use a great deal of garlic which covers a multitude of sins. It makes very little difference to them whether the fish is fresh. They do not object to washing their fish in water from the main harbor channel which does not appeal to most of us as suitable for this purpose, and they can not understand why the public should be more particular. They do not seem to realize that the fish will be considerably less fresh when delivered to the consumer than when in their possession. This, of course, does not apply to all of them. There are many whose methods are very satisfactory but there are enough of the careless ones to have a very bad effect on the business. I have no doubt that the consumption of fish in Southern California could easily be increased to fifteen times its present proportions and that considerable quantities could be shipped. I think this will happen but can not say how soon.

The first signs of cold storage are already here. An attempt was made to start the Larsen process for preserving fish. The patent rights for the Otteson method and the Fergus method have been purchased. A lease on space for a cold-storage plant has been applied for. At least five small units have been using mechanical refrigeration. The Southern Pacific Fish Company installed an outfit in Los Angeles for freezing fish by the Fergus method, which venture does not appear to have been a success. They were fundamentally wrong in placing it so far from the source of supply. They are now installing it at San Pedro and may be more successful.

As the business is practically certain to grow to considerable proportion it is important that ample encouragement be given now to the

scientific study of problems which may have a bearing on the expansion of the industry. Many of these problems do not concern you directly as health officials but most of them will at least interest you as citizens of the state. The best interests of the state will be served by a proper balance between exploitation and conservation of the fish supply. Those of us who are not financially interested are apt to put the accent on conservation. We are apt to think that the fish dealer or canner is interested only in grabbing all of the available supply and is not interested in conservation. This is not much of a compliment to the business judgment of a group of men who have invested some twenty millions of dollars in a business. A little reflection will readily convince one that they are much more interested in conservation than citizens in inland towns who have no financial interests. Occasionally something gets into the papers about the enormous waste of sardines for fertilizer, or someone who a few years ago caught tuna and yellowtail in the harbor finds that he can not do so now and immediately decides that they have been over-fished and are getting scarce. A very casual examination of the channel waters will readily show one good reason why no self-respecting fish can now be caught there. A count of the number of boats going by my office in a day will show another reason. The oil from the bilges of vessels is another factor in keeping fish away from the harbor. The filling up of the marshy places by dredging has destroyed an immense amount of marine life which undoubtedly has an indirect bearing on the movements of fish.

The conservation of fish is probably better provided for in California than in any other part of the world. It is in the hands of the Commercial Fisheries Department of the California Fish and Game Commission. They are keeping very careful and complete records of all deliveries of fish and studying them in the light of the most modern scientific knowledge. They will undoubtedly be the first to recognize signs of actual depletion and hope to be able to do so in time to provide methods of averting it. In addition to the statistical work they have a corps of scientists studying the life histories of the various species of fish which are of commercial importance.

Scientific study of the problems involved in the canning of fish has been in progress for several years by the United States Bureau of Fisheries, the United States Bureau of Chemistry and the National Cannery Association. The Bureau of Fisheries is maintaining a laboratory and an experimental cannery in San Pedro, which will be of great assistance in keeping the cannery modern in their methods. The Bureau of Chemistry operated an experimental cannery in San Diego for a period of three years. In addition to the cannery experiments they made chemical analysis of the more important food fishes at various times of the year. They also made a very complete study of the manufacture of the by-products.

The canneries as a whole are relatively modern in their equipment, methods and sanitary features. Their business is conveniently divided into three branches, obtaining raw material, manufacturing and selling. They are suffering chiefly from weakness in the latter at present. During the war sales were the least of their troubles. This end of the business was consequently neglected and they failed to make sufficient provision in this field for a return to normal times. The one thing that is now needed to make their business a real success is collective advertising.

They have a very excellent reputation for cleanliness. We have been informed by several competent authorities that as a group they are the cleanest and most presentable fish canneries in the world. This condition is partly from choice and partly because the health authorities have an occasional voice in the matter.

Very little study has been given to the salting of fish in this locality because of the small demand for the product and because of the general belief that the processes have been thoroughly worked out elsewhere.

Practically nothing has been done in the way of studying the packing and transportation of fresh fish in this section. This has been given adequate study in other sections, however, and what is needed here is chiefly demonstration. Some investigations on the cold storage of fish will no doubt be undertaken by some governmental agency as soon as the business is started on a sufficiently large scale.

There has been excellent progress in the building of boats and of marine engines. In this respect perhaps we are more modern than other fishing centers.

There seems to have been remarkably little advancement in the methods of fishing. It may be that improvement in these methods is more difficult than one would imagine but to an outsider there appears to be a remarkable similarity between the methods now in use and those that were fully described years ago. When the large tuna are running abundantly and the demand for them is keen the fishermen can not get them because they are too large. The nets are not strong enough. Southern California would be an ideal place for the study of deep-water fishing. The continental shelf is so abrupt that very deep water may be found within a few miles from shore. The water is calm and there is good shelter in the lee of most of the channel islands. It is well known that there are numerous varieties of fish in deep water. Some investigators have even gone so far as to suggest that they may be as abundant as in the shallower waters. As a matter of fact, however, very little is known about deep waters and it seems that not enough serious effort has been made to learn. Perhaps this is because it has not appeared to be necessary while the available supply of fish is ample for the demand and also because it can not be done without considerable expense.

With the exception of an area off Santa Barbara and an extremely small stretch off San Pedro there is practically no place in Southern California where drag net fishing can be carried on outside the three mile limit. It is forbidden by law within three miles of shore. The larger part of the fish caught is taken when the fish are shoaling near the surface.

Line fishing for rockfish is practically all done at a depth of less than fifty fathoms.

Our knowledge of the ocean bottom is extremely deficient. Except in the vicinity of harbors and coastwise courses the published soundings are few and far between. Very few fishing banks are known within reach of our fishing centers though it is very probable that some would be discovered if systematic soundings were made. The United States Coast and Geodetic Survey has recently been at work recharting the coast line. We do not know whether they have made any additional soundings off shore.

A great deal has been written about poisonous fishes. As far as I am aware the only authentic reports have come from the tropics. A number of species commonly used here and elsewhere and highly prized as food are regarded as extremely dangerous in tropical countries. I have read several articles about the very poisonous barracuda and have seen warnings against its use. This fish has been used here very extensively for many years. The catch has amounted to between three and four million pounds annually. We have never heard of a case of poisoning from it.

The fishermen are very cautious in handling sculpins, which is the favorite fish with most of them. They have the impression that the anterior ray of the dorsal fin is poisonous. The sting of the stingray is universally considered poisonous. Many of the jelly fishes are also said to be poisonous. I have inquired rather carefully and have not found any evidence of poison ducts or glands or of any actual poisoning from any of these sources. Some jelly fish are known to be capable of delivering an electric shock, and some are said to sting somewhat like a nettle. The sculpins and stingrays are slimy and are bottom feeders and a wound from either of them is almost sure to be infected if not promptly cleansed. A cut from either of them is painful especially when salt water gets into it.

Stale fish are apt to be flavored with amines and with rancid fish oil and are decidedly nauseating. I have known several instances of vomiting from eating stale fish and scavenger fish.

Danger from eating canned fish is rather remote. Fortunate circumstances in their favor are the facts that they almost invariably swell if they spoil at all after canning unless the can happens to leak, and whether they swell or not they are pretty sure to smell so very badly that there is little chance of their being eaten.

Canned tuna is particularly free from spoilage. There are several reasons for this. First the fact that it is one of the higher fishes and its flesh is of more stable chemical composition than that of some other fish. It is a well known fact that the lower forms are much more subject to decomposition by bacteria or enzymes than the higher. A vivid illustration of this fact was given in the disastrous attempt to can the grayfish farther north. Also the trouble that has been experienced in preserving shrimp and lobsters.

Tuna, as you may know, is a more or less warm blooded fish. It was the discovery of this fact by Davi that shattered the sharp distinction between warm and cold blooded vertebrates.

The first process to which the fish are subjected in the canneries is a long cook of from three to four and one-half hours, depending on the size of the fish, in steam at 214 to 216 degrees, Fahrenheit, followed by a prompt cooling. This serves to partially sterilize the flesh and to reduce the moisture content to such an extent that it becomes a less favorable medium for the growth of bacteria. The oil which is added in canning is a further factor in preservation. The final process is a retorting of fifty-five to seventy-five minutes at 240 degrees, Fahrenheit, for the seven ounce cans.

The few cases of spoilage which have occurred in canned tuna have usually been traceable to outright mistakes in retorting, in which cases the entire lot has been lost, or to leaky cans. It is not uncommon for the leak in a can to close up and produce a swell.

Sardines are not subjected to the long preliminary cook but receive a much longer retorting. The long retorting is required to assure a complete softening of the bone, and a process sufficient for this purpose is likely to be uncomfortable for micro-organisms. Tomato sauce is easily sterilized but some trouble has been experienced with goods packed in mustard. There has also been some trouble due to action on the tin after long standing in one position. It is probable that enamel lined cans may be used for this reason. There is no trouble of this kind with tuna because of the small amount of moisture and the protection of the tin by the oil.

Two types of spoilage of tuna before canning were common in the past but have now been practically eliminated. One of these was a souring which occurred after the fish were cooked, and was due to their being allowed to remain warm for too long a time. It has been overcome by providing for prompt cooling after the cook. The other type was the famous "honey-combing" of which no doubt all of you have heard. This can not be detected until the fish are cooked. For this reason fish, which are suspected of being a day old or show signs of staleness are accepted "subject to cook," which means they are not paid for if they show honeycomb. Honeycomb is recognized by holes in the flesh containing a caustic liquor which is very irritating to the skin and especially to mucous membranes. Sore hands and arms from this cause were formerly rather common among the fish cleaners and it has been suggested that some of the product may have gotten into the cans. We hope, however, that this is entirely a thing of the past. Honey-combing does not, as was formerly supposed, indicate an advanced stage of decomposition. Its nature is not fully understood. It does not appear except after long cooking and we have frequently obtained it in fish from the markets which were considered perfectly edible.

A great deal of injury has been done the tuna industry by the packing of the scrap meat, the white and the black meat together, and by packing the darker meat varieties without due care to differentiate it from the white meat tuna. It is true that a great many people prefer the darker varieties, but the tuna business was built up on white meat tuna and its similarity to chicken. A woman who has been accustomed to using white meat tuna and is not familiar with the other varieties is likely to consider herself defrauded if she is sold a can of bluefin or striped tuna. She may even think it is spoiled because dark colored.

Parasites are of common occurrence in fish. They are more common in some species than in others and some of them are prevalent only in certain seasons. They are less prevalent in pelagic than in the shore and bottom fishes. They are less common in southern California waters than in most other fishing centers. This is probably, at least partly, because there are no great rivers entering the ocean to provide the varying degrees of salinity and because we have so little shallow water.

We have never observed any parasitic worms in tuna but there is a fluke which is common in skipjack in September. Several wire worms or thread worms are of common occurrence in halibut and in kingfish.

The United States Bureau of Fisheries has stated in a circular on the subject that none of these are known to be harmful to humans. Their presence, if observed, will, however, not increase the sales of fish. In my opinion all fish found to be infected with parasitic worms should be condemned.

THE HEALTH OFFICER AND THE NEEDY CHILD.*

By AMY STEINHART, Chief Children's Agent, State Board of Control.

Two enactments of the last legislature have placed upon the statutes of California excellent contributions to the commendable program for child care, both might well be included in the nation's program for the conservation of its resources; for this century recognizes clearly, and may be for the first time, that a sound conservation schedule must include as one of its constituent parts the conservation of the human element and to do this intelligently, the fight must be made for the health and well being of the human element in its formative period—that of childhood. Conservation, of course, signifies the prevention and curing of those ills which each year have tended to decrease or handicap the ranks of childhood and saving them from those evils of poverty which for all time may undermine human effectiveness. Neither of the new measures can reach its highest degree of usefulness without the ardent cooperation on the part of health officers and a clear-cut understanding of its purport of how your group may best assist in putting it into operation.

The first of these measures is an amendment to the orphan's aid act which will extend its provisions so that they shall include the child of the tuberculous and the permanently incapacitated father. The second is known as Senate Bill No. 411 and sets aside the sum of \$200,000 for the hospital care of needy legal residents of the state.

Inasmuch as the granting of aid to orphan and half-orphan children was in the first instance made possible through an act of the constitution, it was necessary to submit any extension of its powers to the electorate, and so as you all remember the election of November, 1920, saw the ratification of this amendment and the last legislature made it possible to put it into effect. The bill, which is codified as Chapter 890, Statutes of 1921, amends Section 2283 of the Political Code and became operative on September 1 of this year. To quote exactly, it permits the allowing of state aid to the "child or children of a father who is incapacitated for gainful work by permanent physical disability or is suffering from tuberculosis in such a stage that he can not pursue a gainful occupation." The sum of \$10 per month in state aid and an equal amount in county aid is designated as the maximum grant.

It seems obvious first of all that the granting of state money without a supplement of county money where it is needed, does not carry out the intent of the law, but merely maintains a method of living which is bound to be below a minimum standard of decency and which does not in any way fit in with a conservation program. We find that often public officials do not know that the county may and ought to pay its share toward the care of needy dependents. The very fact that the state has assumed the support of this new group will relieve counties of a burden they have entirely borne in the past and should stimulate counties to raise to a plane of adequacy such incomes as the state first provides. I am, therefore, pleading with health officers that especially with the group with whom they are to have a contact and in whose causes there will be so obviously the necessity for a well balanced and sufficient diet, they exercise their every effort to reach the minimum standard of living which is recognized as the only means toward the

*Read at the Annual Conference of State, County and Municipal Health Officials, Santa Monica, September 27-30, 1921.

prevention of sickness. The Board of Control, in its supervision of the distribution of funds to this group of families has, with the aid of tuberculosis and general medical experts, and social service workers, devised the following rulings: That in the case of the incapacitated father the law must be carefully followed: i.e., that the incapacity is permanent and that the father can not pursue a gainful occupation. The state of Delaware which has a like enactment is providing in cases where there is a complete paralysis, blindness, locomotor ataxia, insanity (for which affliction California has already made provision), blindness and rheumatism of the crippling type. There are, however, numerous other incapacitating maladies, accidents, both industrial and nonindustrial, which will be given consideration. When this legislation was first discussed, the difficulty of sufficient and proper supervision in a state of the size of California, were on many sides suggested as arguments against its enactment, but it was felt that if the requirements of the Board of Control were made with great care, there would be no fear that the group of people in actual need would be assisted and that no form of malingering or misuse of the fund would occur. It was, therefore, decided that with each application for aid there shall be presented a report for which forms are in the possession of county auditors. These reports are to be made by a physician connected with one of the recognized health centers, community clinics or the county or city health officer or a physician approved by the county medical society. They must affirm that the incapacity is of a permanent character and of such a degree that the patient can not pursue a gainful occupation.

In the case of the tuberculous parent, it is hoped that this new act may assist very appreciably in the fight being waged against the white plague and be a means not only of hastening the recovery of its victims, but may, best of all, prevent the development of the disease and in as large a degree as possible the infection of the children of afflicted parents. This is the prime reason for making as a first ruling that such children who draw state aid, must be living in a nontuberculous environment, preferably the father shall be admitted to a sanatorium, or if space for him is not available, the children be transferred to a foster home and subject to the supervision of a tuberculosis society or a public health nurse. Local physicians must hold themselves responsible for the supervision of such homes and for this reason, each application for aid must be accompanied by a report for which forms may also be obtained from the county auditor. It is hoped that local communities will feel the responsibility of locating tuberculous fathers in the early stages of their illness and for this reason we are asking you to give this act the widest publicity and thus make known to wage earners that if they are TB there awaits them a means of supporting their children provided only they will refrain from work and submit themselves and their families to proper supervision and care.

The second measure is known as the bill for the medical care of needy legal residents. It sets aside for a biennial period the sum of \$200,000 to be used by the University hospitals "to provide hospital service and treatment for needy legal residents of the state." Inasmuch as the facilities of the medical school and hospitals are limited, the intent and purpose of the law can best be carried out by devoting the hospital to the care and treatment of acute and remedial conditions and to those problems in diagnosis for which the facilities available in the local communities are inadequate or which require special study and observation.

Patients with chronic diseases, or conditions which require long treatment, or a type of treatment which can be given locally or in a less specialized institution, should not displace those for whom the University can render a greater service in a shorter period. While preference shall be given to needy children and mothers, this service is also available to other needy legal residents.

The law especially requires that transportation to and from the hospital be guaranteed to the Regents of the University by the community to which the patient belongs. Persons who can afford to pay for a part of the cost of the service rendered are expected to pay such amounts as are deemed equitable and just. No person who is able to pay a private physician for service or treatment is eligible to this free or part-pay service.

Application for admission must be made by letter to the Director of Hospitals at the University of California Medical School and Hospitals, Third and Parnassus avenues, San Francisco. The letter shall embody the following information:

First: That this is an application for aid under an "Act to provide service to needy legal residents."

Second: That it be written by a county health officer or other medical officer charged with the responsibility of the needy sick of the county; that if the patient is under the care of a physician holding a physician and surgeon's certificate, his written approval must be included; that this approval should specify distinctly the necessity for the transfer of the patient, the impracticability of making the proper diagnosis or giving proper relief in the local community, the inability of the patient to pay for the service desired and his need for medical care at the expense of the state.

Third: An abstract of the medical history of the patient, and an assurance that the patient comes under the provisions of the act and may be classified as needy and a legal resident.

It has been suggested that one more matter may advantageously be brought to your notice at the present time and that is the fact that some years ago the Industrial Accident Commission amended its law to make the word "accident" read "injury" and thus permit the granting of compensation in cases where disability or death was due to industrial diseases as well as industrial accidents, and in the last years awards have been made in cases of miners consumption and typhoid, due to occupation, influenza contracted by nurses or hospital attendants, deaths or injuries from various forms of fume poisoning, etc. We who act as the "after care" department for the commission and as children's agents for the Board of Control know that this right of the employee is not always known and, therefore, a claim is not made for compensation.

It is the desire of the Industrial Accident Commission that every employee who may be eligible to the benefits of their fund be recognized, and it is at their request that we are asking you for your recognition of the extension of the act under which the commission operates. A long list of compensable diseases might be tabulated for you, but your medical knowledge is sufficient to give you an understanding of what are the diseases which may be deemed a proper charge upon industry. Further information in this regard may be secured from the Industrial Accident Board.

In conclusion, permit me to say that I trust I have made clear to you how very important it is that the health officers of the state understand to what degree they may assist us in taking to the needy or dependent child such benefits as the state holds out for him. A childhood which is regarded by the commonwealth as worthy of such consideration should not, at any time, be regarded as neglected.

DIVISION OF EPIDEMIOLOGY.

FRANK L. KELLY, M.D., Epidemiologist.

September, 1921.

Diagnostic Investigations:

Locality.	Condition Suspected.	Findings.	Investigator.
Stockton.....	Rabies.....	Encephalitis.....	Kelly.
Modesto.....	Poliomyelitis.....	Poliomyelitis.....	Gillihan.
Los Banos.....	Smallpox.....	Smallpox.....	Gillihan.
Lytton, Sonoma County.....	Poliomyelitis.....	Encephalitis (2 cases).....	Kelly.
Sonoma County.....	Poliomyelitis.....	Encephalitis (1 case).....	Kelly.

Field Investigations:

- An investigation of poliomyelitis in Sacramento.
- An investigation of typhoid fever from Guerneville, in Oakland, Berkeley, Albany, San Francisco.
- An investigation of poliomyelitis in Vallejo.
- An investigation of rabies in Alhambra.
- An investigation of rabies in Pomona.
- An investigation of rabies in Fullerton.
- An investigation of rabies in Santa Ana.
- An investigation of rabies in Eagle Rock.
- An investigation of smallpox in Atascadero.

MORBIDITY.

For the Month of September, 1921, by Weeks.

Diseases	Sept. 10	Sept. 17	Sept. 24	Oct. 1	Total Sept. 1921	Total Sept. 1920
Anthrax.....	1	.....	1	.....	2	2
Botulism.....	1	.....	1	.....	2	2
Cholera—Asiatic.....	.....	.....	.....	.....	.....	.....
Cerebrospinal meningitis.....	4	2	5	.....	11	8
Chickenpox.....	21	43	22	35	121	114
Diphtheria.....	122	126	143	135	527	366
Dysentery (amoebic).....	1	1	.....	1	3	.....
Dysentery (bacillary).....	3	.....	6	3	12	11
Encephalitis lethargica.....	.....	2	.....	2	4	4
Erysipelas.....	7	6	8	9	30	24
German measles.....	.....	1	2	4	7	7
Glanders.....	.....	1	.....	.....	1	.....
Gonorrhoea.....	73	102	188	113	476	452
Hookworm.....	.....	.....	.....	.....	.....	.....
Influenza.....	13	9	10	6	38	54
Leprosy.....	.....	.....	.....	.....	.....	.....
Malaria.....	9	21	11	6	47	61
Measles.....	10	15	9	15	49	141
Mumps.....	28	44	37	44	153	183
Ophthalmia neonatorum.....	.....	.....	.....	.....	.....	1
Paratyphoid.....	.....	1	3	1	5	5
Pellagra.....	1	1	.....	.....	2	2
Plague.....	.....	.....	.....	.....	.....	.....
Pneumonia.....	56	54	45	33	188	91
Poliomyelitis.....	12	16	17	20	65	11
Rabies.....	.....	.....	.....	.....	.....	.....
Rocky Mountain spotted fever.....	.....	.....	.....	.....	.....	.....
Scarlet fever.....	39	66	66	65	236	205
Smallpox.....	29	43	47	28	147	179
Syphilis.....	69	109	113	111	402	317
Tetanus.....	2	3	3	.....	8	4
Trachoma.....	1	5	8	2	16	10
Trichinosis.....	.....	.....	.....	.....	.....	.....
Typhoid fever.....	34	19	32	30	115	163
Tuberculosis.....	118	143	170	130	561	538
Typhus fever.....	.....	.....	.....	.....	.....	.....
Whooping cough.....	42	42	30	34	148	213
Yellow fever.....	.....	.....	.....	.....	.....	.....
	695	875	976	827	3,374	3,166

DIVISION OF SANITATION.

EDWARD T. ROSS, Chief Sanitary Inspector.

During the first two weeks of September 67 summer resorts, 60 automobile camp grounds and 156 roadside auto camps were inspected. Over 1500 camp regulations and miscellaneous camp notices were posted in the camps and along streams and highways. In practically all of the summer resorts and in many of the automobile camps visited insanitary conditions were found, due chiefly to poor sewage and garbage disposal. The owners of all such places promised to make all sanitary improvements recommended. At the time inspections were made conditions were satisfactory in the following places.

Summer Resorts: Oakglen Lodge, Los Terrinitos Resort, Oakzanita Resort, and Powam Lodge.

Automobile Camp Grounds (municipal): Newport Beach, Long Beach, Santa Monica, Fullerton, Anaheim, Corona, Hemet, Balboa Park, and Fairfield.

Automobile Camp Grounds (privately owned): B. H. Hess, Hermosa Beach; J. H. Reed, Seal Beach; Hotel Clifton, Camp Redlands; and W. E. Irving, Irvingdale.

Reinspection was made of 7 automobile camp grounds and 19 miscellaneous premises, hog ranches, canneries, packing plants, food establishments, etc. All improvements recommended had been made and conditions in general were found to be satisfactory.

From September 3d to 11th a representative from this division supervised sanitary conditions in the State Fair Grounds, Sacramento. During this period frequent inspections were made of food supply places, refreshment stands and the grounds in general. Through the cooperation of the fair officials, employees and concessionaires a high standard of sanitation was maintained.

During the last two weeks of the month, 380 miscellaneous premises were inspected, and 41 complaints relative to insanitary conditions in various localities were investigated. In addition 10 special investigations, covering rabies, stream pollution, prevalence of rats, and the disposal of garbage and sewage were made. Over 60 sanitary reports covering the inspection of summer resorts, automobile camps, beach resorts, sewage disposal, etc., were submitted.

The following counties were visited during the month: Del Norte, Humboldt, Mendocino, Sonoma, Napa, Yolo, Solano, Sacramento, Contra Costa, Alameda, Santa Clara, San Benito, Santa Barbara, Los Angeles, Orange, Riverside and San Diego.

SUMMARY OF OPERATIONS.

Summer Resorts.

Inspected.....	67
Placed in sanitary condition.....	4
Water flush toilets provided.....	26
Septic tanks, installed.....	6
Covered cesspools provided.....	30
Kitchens screened.....	7
Metal garbage cans provided.....	22
Premises cleaned, yards, etc.....	17

Automobile Camp Grounds.

Inspected.....	64
Reinspected.....	7
Complied with regulations.....	20
Water flush toilets provided.....	40
Toilets connected with city sewer.....	10
Septic tanks installed.....	5
Covered cesspools provided.....	18
Flytight toilets provided.....	11
Metal garbage cans provided.....	184
Water supplies improved.....	6
Roadside auto camps inspected.....	156
Camp regulations posted.....	102
Miscellaneous camp notices posted.....	1398
Camp notices distributed to health officers and others.....	207

Investigations and Inspections.

Rabies.....	2
Prevalence of rats.....	1
Sewage systems.....	4
Water supplies.....	1
Garbage disposal.....	2
Complaints.....	41
Complaints request of health officers.....	14
General sanitary conditions (towns).....	2
Miscellaneous premises inspected.....	380
Reinspections miscellaneous premises.....	19
Inspections State Fair Grounds.....	270
Health meetings attended.....	7
Sanitary reports submitted.....	62
Nuisances abated.....	470

DIVISION OF DENTAL HYGIENE.

CHARLOTTE GREENHOOD, Supervisor.

Since the September report of the Division of Dental Hygiene was submitted, this department has been called upon to enter into some interesting activities. An exhibit was prepared and displayed for the health officers section of the League of California Municipalities, in conjunction with other departments of the State Board of Health.

The exhibit introduced the purpose of this division, and gave certain suggestions on dental hygiene.

A large model of the upper jaw was used in front of a display screen, which demonstrated the normal, and contrasted the abnormal conditions ordinarily found in the mouth. From such abnormal conditions as abscesses, dental decay, gingivitis, etc., demonstrated on the model, ribbons directed the eye to educational placards on the screen. The proper care of the teeth was also emphasized by ribbons, attached to the side of the model that showed normal conditions.

Pamphlets, correct toothbrushes, and models, were also displayed, and these proved helpful as suggestions to the visiting health officers and nurses, who, in most cases, were interested in discussing as well, some oral hygiene program for their own communities.

In addition to the fact that other members of this convention stopped to enjoy the exhibits, perhaps the most encouraging thing was to find a keen interest among the citizens and pleasure seekers at Santa Monica.

The discussion of the paper "Dental Hygiene and Public Health," read at one of the meetings of the health officers section, demonstrated the fact that there is throughout the state an awakening to the importance of dental hygiene, especially as it pertains to the school child.

However, the possibilities of a dental hygiene program are yet not well understood. That dental hygiene offers some remedy to the dental

decay is appreciated, and perhaps the fact that nearly every child is suffering from this disease makes the public health worker eager and impatient for a remedy.

It must be considered, however, that the enthusiasm in dental hygiene has been rather spontaneous and very recent. It is only within the last four or five years that we have had a worker in the field, and the enthusiasm has spread so quickly that the demand for service far exceeds the number of dentists or dental hygienists that are sufficiently interested in public health to enter that field.

A statewide educational program on dental hygiene and the value of the school dental clinic will undoubtedly assist in bringing about an understanding or an appreciation by the student dentist, or dental hygienist, of the field in which their services will be of great value, and to which they owe at least a limited amount of their time and interest.

At the request of San Luis Obispo County, the division assisted a program to encourage interest in school dental clinics there. Talks were given all over the county to mothers' clubs and school children. Conferences were held with the dental committees, and it was gratifying to find suggestions on educational programs most acceptable.

The plan of the various communities in this county is to have the county dentist spend certain weeks of the year in each central community.

Dental equipments are to be furnished in Paso Robles, Atascadero, and San Luis Obispo. Children from outlying districts will be brought to each center for dental service.

The exhibit of the division was also displayed with the other departmental exhibits in the Southern California fair, held in Riverside, October 11 to 17, 1921. Visitors from all over the state were in attendance, and expressions of commendation of the State Board of Health's educational programs were made by a great many. The great number of names, taken for certain Board of Health literature, suggests that the people are eager for information concerning health measures. This exhibit was also placed at the Flower Show, in Los Angeles.

Riverside and San Bernardino counties are improving dental clinic services for school children there. Arrangements have been made for talks on oral hygiene later in the spring.

The Division of Dental Hygiene was called upon this month to assist in the selection of school dental equipment for the Contra Costa County school dental clinic.

The Southern California Dental Association and the California State Dental Association have expressed their desire to cooperate with this division.

STATE HYGIENIC LABORATORY.

REPORT FOR SEPTEMBER, 1921.

W. H. KELLOGG, M.D., Director.

DIVISION OF THE HYGIENIC LABORATORY.

Report of Examinations Made by the California State Hygienic Laboratory During the Month of September, 1921

Condition suspected	Positive	Negative	Incon- clusive	Total	Units
Anthrax.....		2		2	10
Diphtheria.....	318	589	49	956	956
Diphtheria (special investigation)*.....	21	313	20	354	354
Diphtheria (virulence test).....	3	3		6	120
Dysentery (excreta).....		17		17	85
Gonococcus infection.....	37	85	42	164	656
Malaria.....	2	28		30	750
Meningitis.....		2		2	10
Paratyphoid (Widal).....	4	1		5	50
Rabies.....	3	11		14	700
Syphilis (Wassermann test).....	315	839	143	1,297	6,485
Tuberculosis (sputum).....	8	127		195	585
Tuberculosis (animal inoculation).....	1	1		2	80
Typhoid (Widal test).....	23	91	1	115	1,150
Typhoid (excreta).....	6	68		74	460
Miscellaneous.....				11	55
Pasteur treatments.....				202	2,020
				3,446	14,526

*Benicia 121; Vacaville 115; Soledad 56; Sherman Institute 15; County Health Department, Los Angeles 47.

DIVISION OF THE HYGIENIC LABORATORY.

Summary of Examinations Made in the California State Hygienic Laboratory During the Month of September, 1921

Condition suspected	Positive	Negative	Incon- clusive	Total	Units
Main Laboratory at Berkeley:					
Anthrax.....		2		2	10
Diphtheria.....	205	338	145	588	588
Diphtheria (special investigation)*.....	20	260	12	292	292
Diphtheria (virulence test).....	3	3		6	120
Dysentery (excreta).....		17		17	85
Gonococcus infection.....	22	32	34	88	352
Malaria.....		27		27	675
Meningitis.....		2		2	10
Paratyphoid (Widal).....		1		1	10
Rabies.....	2	10		12	600
Syphilis (Wassermann test).....	315	839	143	1,297	6,485
Tuberculosis (sputum).....	52	88		140	420
Tuberculosis (animal inoculation).....	x1	21		2	80
Typhoid (Widal test).....	5	48		53	530
Typhoid (excreta).....		39		39	195
Miscellaneous.....				10	50
Pasteur treatments (inoculation).....				17	170
				2,593	10,672
Southern Branch at Los Angeles:					
Diphtheria.....	110	238	3	351	351
Diphtheria (special investigation)†.....	1	53	8	62	62
Gonococcus infection.....	15	53	8	76	304
Malaria.....	2			2	50
Paratyphoid.....	4			4	40
Rabies.....	1	1		2	100
Tuberculosis (sputum).....	16	37		53	159
Typhoid (Widal test).....	17	40	1	58	580
Typhoid (feces).....	6	29		35	265
Miscellaneous.....				1	5
Pasteur treatments (inoculations).....				185	1,850
				829	3,766

DIVISION OF THE HYGIENIC LABORATORY

Summary of Examinations Made in the California State Hygienic Laboratory During the Month of September, 1921—Continued.

Condition suspected	Positive	Negative	Incon- clusive	Total	Units
Northern Branch at Sacramento:					
Diphtheria.....	3	13	1	17	17
Malaria.....		1		1	25
Tuberculosis (sputum).....		2		2	6
Typhoid (Widal test).....	1	3		4	40
Pasteur treatments (inoculations).....					
				24	88
				3,446	14,526

*Benicia 121; Vacaville 115; Soledad 56. †Sherman Institute 15; County Health Department 47. xPus. ¹No growth. ²Spinal fluid.

DIVISION OF PARASITOLOGY.

Summary of Examinations Made in the Division of Parasitology During the Month of September, 1921.

Total specimens examined.....	381
Total examinations for protozoa.....	381
Total examinations for worms.....	372
Positive examinations—	
Protozoa:	
Endamoeba dysenteriae.....	61
Conselmanis.....	13
Flagellates:	
Giardia.....	18
Chilomastix.....	8
Trichomonas.....	5
Worms:	
Hookworm.....	3
Oxy. verm.....	1
Trichuris.....	1
Oxy. incog.....	2

PREVENTIVE THERAPEUTICS.

Pasteur Treatments for the Prevention of Rabies by the State Hygienic Laboratory During the Month of September, 1921.

	Treatment commenced	Treatment completed
Main Laboratory at Berkeley.....	1	0
Southern Branch at Los Angeles.....	1	10
Laboratory of Los Angeles Board of Health, by deputized bacteriologist.....	3	1

Vaccine Issued by the State Hygienic Laboratory During the Month of September, 1921.

Mixed typhoid-paratyphoid vaccine:	
Number of physicians and institutions to whom vaccine was sent.....	8
Amount of vaccine sent.....	417 c. c.

Ophthalmia Neonatorum Prophylactic Outfits Distributed During the Month of September, 1921.

Number of outfits, containing two ampoules each, issued.....	1,095
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PUBLIC HEALTH INSTRUCTION.

Participation in Instruction in Public Health During September, 1921.

Main Laboratory at Berkeley:	
Bacteriological instruction outfits received.....	0
Bacteriological instruction outfits sent out.....	1

BUREAU OF TUBERCULOSIS.

REPORT FOR OCTOBER, 1921.

EDYTHE TATE THOMPSON, Director.

Migration in California with the exception of the ex-soldier, either sent here or seeking health of his own volition, no longer constitutes the problem that it did in former years. Eastern physicians still advise patients to go West. Frequently the patient is sent West by a physician to enter a private sanatorium and not infrequently the patient's friends decide that a collection to ship "John Doe" West and then let him struggle for himself is a kindness, but we wish they might stretch their imagination instead of their purses and picture "John Doe" arriving in a state where well people with bank accounts and automobiles have difficulty in finding a lodging for the night. We wish they might realize what a hazard a man runs if he coughs too much in a lodging house, and as for that old time-worn advice, gray bearded now, to go West and take a job out of doors; they have forgotten, if they ever knew it, that outdoor work in the West isn't of the light variety and that Mexicans accustomed to the rays of the California sun do the work and that a well American can not compete with them.

The Jewish Consumptive Relief Association operates a tuberculosis sanatorium at Duarte in Los Angeles County. They collect funds from all over the United States, consequently they must take patients from all over the United States. The great problem, however, connected with Duarte is not the importation of patients, but the absorbing of them into the economic life of the community. The Bureau has had splendid cooperation from the Board of Directors at Duarte, and we have hopes that, because of the fact that the largest number of their patients have come out of the garment trade, that the possibility of developing some work for these patients is greater than in the average sanatorium population.

Los Angeles has spent hundreds of thousands of dollars advertising its climate and sunshine. Last winter, one bitter cold day with the wind blowing an icy blast off of Lake Michigan, I waited in a station in Chicago for my train home, and standing in front of the board on which were posted announcements, was a most alluring poster of Los Angeles, like Abou Ben Adhem "it led all the rest," and as I looked at it there came through the door a man, without an overcoat, with newspapers sticking from the bottom of his coat to keep him warm. He was obviously a sick man and he was clearly without funds. Looking at him he reminded me of hundreds of men I had seen like him in the county hospitals in the days before the subsidy. He looked at the board, I watched him and then followed him as he walked to the ticket window, "What's the cheapest fare to Los Angeles?" he asked the agent. It made me actually faint as I watched him return from the ticket office again to look at the advertisement, and to hear the train called and see the bundled figures of men and women in furs worth a fortune. I thought of him all the way across the continent trying to reconcile in my own mind his misery in Chicago against his misery in Los Angeles. A park bench, one meal a day, too sick to work, the county hospital when we needed his bed for someone who by residence of a year was entitled to it.

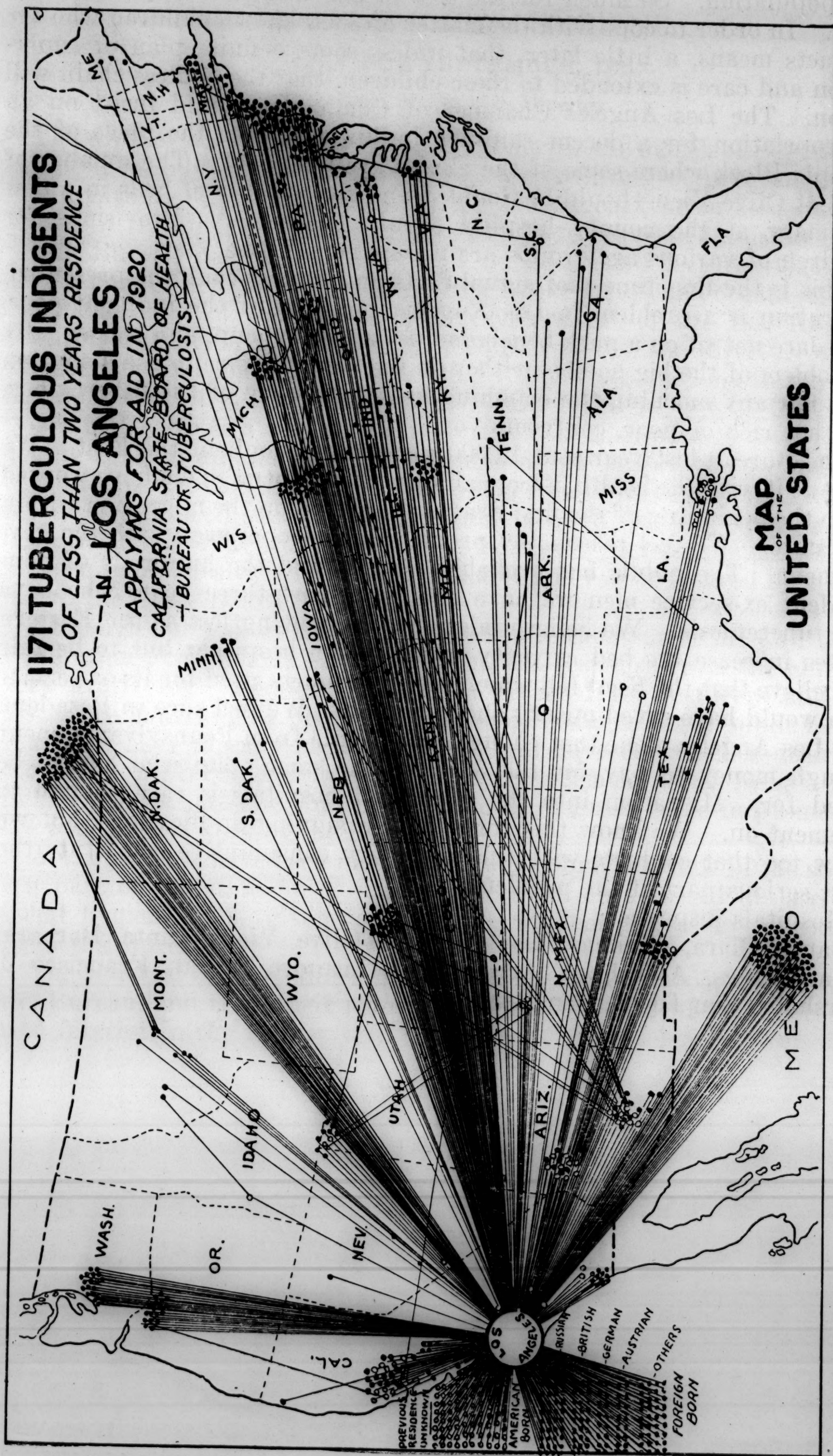
Last January the California Tuberculosis Association in cooperation with the rest of the southwestern states, secured the loan of Miss Jessamine Whitney from the National Tuberculosis Association, the Bureau of Tuberculosis loaned its two field workers, and the California Tuberculosis Association one of its workers, and a study was made of 3103 records of indigent consumptives who had been in Los Angeles less than one year and who had evidently migrated on account of their disease. We are glad to state that in comparing Los Angeles with the rest of the Southwest that the ratio is less than any other city except San Antonio. The ratio in Los Angeles is one nonresident tuberculosis indigent to 186. Because the charities in Los Angeles are combined as city and county agencies under the name of the County Charities it is necessary to exclude 1137 records because their migration had been within the county rather than the city of Los Angeles. Of those whose residence was definitely known 64 per cent were nonresidents, which is the average percentage of the total summary of all the cities in the Southwest. Of this number 1255, 149 had been in the city one week or less when they applied for aid and 567 or 45 per cent had been there less than three months when they were forced to apply. More than one-half of the entire number were men who came alone, but only 55 women came alone and 256 came with their families.

It is interesting to note that only fifty cases of those studied came from Mexico and needed immediate help, but the 604 Mexicans who were born in Mexico but had resided over a year in Los Angeles needed help on account of tuberculosis. When one stops and speculates on the length of time most people have tuberculosis, it shows the laxity of our immigration laws and inspections, that so many of these people break down after reaching the United States. The hardships of returning them would be small compared to their homesickness and utter misery when they are away from their friends. Unable to understand or speak English they make a tragic figure in the hospitals.

There is a great deal of migration within California. Two hundred seventy-eight records were studied of patients who belonged in this state, but the six states who furnished the greatest amount of migration, not only for Los Angeles but the entire Southwest, are New York 123, Illinois 65, Pennsylvania 37, Michigan 26, Missouri 17 and New Jersey 16. There were also 23 Canadians. In the age groups these patients were found between 40-49, 35-39, 30-34 and 25-29.

In the smaller cities of the Southwest every effort is made to return the patients to their homes, but in Los Angeles, on account of its area, it is difficult usually to trace these people. In Los Angeles, out of the 3103, 60 per cent were untraced, 164 had left the city, 749 were known to be in the city, 292 had died. This gives a death rate of 1 in 10, but the 1900 who were untraced have undoubtedly in many instances migrated and died in the neighboring counties. By far the greatest problem and burden for Los Angeles are the 1669 cases who were living with their families. In addition there were 5516 other members who came in daily contact with the patient and 3300 of these were children under 16 years of age. This is by far the most serious part of the entire migration problem.

The total amount of money spent on the indigent tuberculous amounts to nearly \$180,000 per year, a per capita tax of 31 cents per year on



the population. So much for the cost to Los Angeles last year in cold cash. In order to cope with the matter of 3300 known children who are contacts means, a little later, that unless some definite plan of supervision and care is extended to these children, that the endless chain will go on. The Los Angeles Chamber of Commerce should insist on an appropriation for a decent sanitary building to take the place of the Temple Block where some of the clinics are now held. The number of beds at Olive View should be doubled and the number of beds in a new infirmary at the county hospital should be trebled. Provisions for children of various age groups are necessary at Olive View.

This is the first time that actual facts and figures could be presented. Migration is a problem in Los Angeles, not only of the indigent poor, who dare not sit on a park bench and use a sputum cup, and it is equally a problem of the big hotels, neither do their guests dare to use a sputum cup, but any morning the coughing and the misery of the tuberculous, whether rich or poor, confronts you.

The Bureau last year sent 10,000 placards throughout the East. We keep at it with the health officers all over the country. We have worked from the beginning of the first draft to check up on the migration within our state. We feel reasonably proud of our cooperation with the government. The public has probably not realized the hundreds of non-resident ex-service men we have had these past three years who have had tuberculosis. We believe migration is growing less as the Eastern States increase the bed capacity in their own hospitals, but to be fair we believe that the Kent bill which the government used for its ex-service men would have saved misery and suffering. We feel sure in Pasadena and Los Angeles alone that enough rich people from Pennsylvania spent enough money to pay for the 37 from the same state who had to be cared for. Migration into the subsidized hospitals is rare enough to comment on. We know this for a fact in signing applications, but we know too that contacts with the migratory consumptive constitute the most serious part of the problem.

Hospitals inspected:

Santa Clara, Weimar, Los Angeles, Olive View, Santa Barbara, Tulare-Kings, Ahwahnee, Arroyo, San Leandro 2, San Francisco 2, Marshalls, San Diego, San Bernardino.

BUREAU OF SOCIAL HYGIENE.

REPORT FOR SEPTEMBER, 1921.

ELIZABETH MCMANUS, Director.

The work of the Bureau of Social Hygiene for the month of September has been largely devoted to education, the outlining of programs, and the furnishing of lecturers to women's clubs, parent-teacher associations, nurses in training, and other groups who have requested assistance.

The Bureau has added to its staff an additional lecturer who will devote part of her time to assisting these above-mentioned organizations.

As chairman of the public health department of the Los Angeles District, California Federation of Women's Clubs, the director of the Bureau has been able to place before the 161 clubs comprising this group, the work not only of the Bureau of Social Hygiene, but of the State Board of Health as a whole. Letters have been addressed to these clubs, urging each to appoint a local chairman of public health to cooperate with the district chairman, and a list of suggested topics on public health for discussion and study was submitted through the Los Angeles District Bulletin. Attention was also called to the fact that lecturers and films on public health subjects are available and can be secured by applying to the State Board of Health.

Although but a short time has elapsed since the issue of the California Federation of Women's Clubs Bulletin, the response from the clubs is very gratifying. Requests have been received for lecturers and for assistance in arranging programs. In some instances local public health chairmen have already been appointed and have expressed a desire to cooperate in every possible way. This arrangement seems to be a particularly fortunate one, and promises to be of great value in promoting the educational work of the Bureau.

Arrangements have been made with twenty-one hospitals in the southern part of the state for a course of lectures on venereal disease and social hygiene to be given to the senior student nurses by a lecturer from the Bureau.

The venereal disease clinics throughout the state are cooperating with the Bureau, and from their monthly reports it is evident that there is a real interest in the work.

SUMMARY REPORT FOR PERIOD, SEPTEMBER 1 TO SEPTEMBER 30, 1921.

Reports from the following clinics received by the Bureau:

San Diego Clinic.	
San Bernardino Clinic.	
Los Angeles Health Department Clinic.	
Boyle Avenue Dispensary (adults).	
Boyle Avenue Dispensary (children).	
Graves Dispensary.	
Good Cheer Club.	
Stockton City Clinic.	
San Francisco Health Department Clinic.	
Stanford University Clinic.	
Alameda County Health Center.	
Number of new cases admitted to clinics during August.....	371
Number of cases treated.....	1,849
Number of treatments given.....	3,228
Visits to clinics for treatment, examination, advice.....	4,439
Cases discharged or discontinued treatment.....	311
Number of new cases brought into clinics by social worker..	402
Number of cases reported by physicians.....	878
Syphilis.....	402
Gonorrhoea.....	476
Number of ampoules arsphenamine distributed by bureau.....	0
Number free treatments administered by clinics in September.....	36
Number of treatments administered by clinics.....	4,173
Laboratory examinations:	
Wassermann tests.....	2,434
Gonorrhoea examinations.....	515
Requests for pamphlets received.....	101
Pamphlets distributed.....	741
Number of lectures given..... 28 Attendance.....	1,795
Number of film showings..... 4 Attendance.....	690
Number of visits made by social workers:	
To cities (10,000 or over population).....	13
To cities (under 10,000 population).....	7

ARSENOBENZOL REPORT, SEPTEMBER, 1921.

Number of treatments given by:	
Stanford Medical.....	18
Arroyo Sanitarium.....	6
White Memorial.....	9
Pasadena Dispensary.....	3
	36
Treatments received:	
6 patients received one treatment.....	6
12 patients received two treatments.....	24
2 patients received three treatments.....	6
	36
Patients receiving treatments:	
School children.....	14
Housewives.....	1
Patients (laborers).....	3
Infants.....	2
	20
Patients treated at:	
Stanford Medical.....	11
Arroyo Sanitarium.....	3
White Memorial.....	5
Pasadena Dispensary.....	1
	20
Number of ampoules distributed to date.....	23,110
Number of treatment cards received to date.....	23,159

BUREAU OF VITAL STATISTICS

REPORT FOR AUGUST, 1921.

L. E. Ross, State Registrar.

The mortality record for August was not as favorable as the corresponding month last year. A total of 3467 deaths were registered this month. Last August the total was 3435. The present month, compared with August, 1920, shows increases in scarlet fever, diphtheria, tuberculosis, venereal diseases, other epidemic diseases, cancer, diseases of the nervous system, circulatory system, nephritis, senility, suicide and diseases of the bones and skin. Principal increases occurred in tuberculosis, diseases of the circulatory system and nephritis. Compared with last month there was an increase of 25 deaths.

The record for births was considerably below August last year, the present returns, excluding delayed registrations, showing a decrease of 353 events.

Marriages show an increase over August of last year, as well as over last month. The marriage rate is now practically the same as the death rate.

	August		Indicated annual rate—August		January to August, 1921		
					Number	Annual rate	Daily average
	1920	1921	1920	1921	1921	1921	1921
Births.....	5,952	5,599	20.5	18.7	45,470	19.0	187
Deaths.....	3,435	3,467	11.8	11.6	30,860	12.9	127
Marriages.....	3,911	4,137	13.5	13.8	30,827	12.9	127

Note.—The above table includes tabulated returns only.

The infant mortality rate for August was the lowest for any month during the last two years, and almost eleven points lower than July. There was a decrease of 55 infant deaths, 342 being reported as against 397 last month. During 1920 the lowest rate was in September, 61.6.

The rate for the present month is 61.1.

Monthly comparison of rates follows:

	1920	1921
January.....	74.1	86.4
February.....	88.9	73.4
March.....	81.3	70.2
April.....	75.8	77.7
May.....	81.5	69.5
June.....	81.9	67.4
July.....	82.0	71.9
August.....	77.6	61.1

Infant deaths by principal causes for August were:

	Number	Per cent
Communicable diseases.....	22	6.4
Diseases respiratory system.....	27	7.9
Diseases digestive system.....	83	24.3
Congenital causes.....	179	52.3
All other causes.....	31	9.1
Totals.....	342	100.0

Infant deaths from communicable diseases continued to decrease during the present month. There was also a decrease in deaths from respiratory diseases, and a very noticeable reduction in deaths from diseases of the digestive system.

The proportion of deaths due to congenital causes advanced about two per cent over last month, but the actual number of deaths was not so great. Deaths from those diseases classed as "other causes" show a sharp increase this month.

Diphtheria.

There were 41 deaths from diphtheria during August. The mortality situation from this disease shows little tendency to improve.

Measles.

Only three deaths from measles were registered during this month. This is the lowest since last December.

Whooping Cough.

Deaths continued to decrease during August, 15 fatalities being reported.

Scarlet Fever.

Deaths from scarlet fever increased from two in July to seven in August.

Tuberculosis.

This month also marked a rise in the deaths from tuberculosis. Ordinarily these show a decrease in August. Until the present month tuberculosis deaths have decreased sharply since April. There were 413 deaths registered this month.

Pneumonia.

Pneumonia decreased slightly during August; 137 deaths compared with 143 last month.

Diarrhea and Enteritis.

The seasonal decline in deaths from diarrhea and enteritis appears to have started this month. In July 155 deaths were registered, and 137 in August. Last year the decrease did not begin until September. In 1919 it started in July. The mortality record for this cause of death has been lower this year than either 1919 or 1920.

Typhoid Fever.

Typhoid fever deaths decreased to 12 in August. The mortality from this disease has also shown a decrease during the present year. During both 1919 and 1920 the seasonal peaks have risen considerably higher than this year.

The following analyses are made monthly by the Bureau of Vital Statistics and can be furnished upon application:

Births:

Counties and cities by sex, race and maternal nativity.
Age of mother by race and number of previous issue.
Stillbirths by county and city.

Deaths:

Counties and cities by sex, race and nativity.
Counties and cities by principal causes of death.
Cause of death (detailed International List) by sex, race, nativity and age.
Tuberculosis deaths: County and city by sex, race, nativity, age, length of residence and occupation.

Infant Mortality: (deaths under 1 year of age)

Counties and cities by sex, race and maternal nativity.
Principal causes of death by age groups.

Marriages:

County totals.
Nativity of bride and groom, correlated.
Marital condition of bride and groom, correlated.
Age of bride and groom.
Race of contracting parties.

DEATHS FROM PRINCIPAL CAUSES—CALIFORNIA.

Provisional Data for August, 1921.

Group No.	Cause groups	Total deaths	Per cent
	All causes.....	3,476	100.0
1.	Typhoid.....	12	.3
2.	Malaria.....	4	.1
3.	Smallpox.....	1	.....
4.	Measles.....	3	.1
5.	Scarlet fever.....	7	.2
6.	Whooping cough.....	15	.4
7.	Diphtheria.....	41	1.2
8.	Influenza.....	4	.1
9.	Dysentery.....	5	.1
10.	Poliomyelitis (acute).....	5	.1
11.	Encephalitis lethargica.....	4	.1
12.	Meningococcus meningitis.....	4	.1
13.	Tuberculosis, lungs.....	357	10.3
14.	Tuberculosis, other.....	56	1.6
15.	Venereal diseases.....	38	1.1
16.	Other general epidemic diseases.....	17	.5
17.	Cancer.....	335	9.6
18.	Other general diseases.....	111	3.2
19.	Diseases of nervous system.....	383	11.0
20.	Diseases of circulatory system.....	600	17.3
21.	Pneumonia.....	137	3.9
22.	Other diseases of respiratory system.....	35	1.0
23.	Diarrhea and enteritis—under 2 years.....	94	2.7
24.	Diarrhea and enteritis—over 2 years.....	43	1.2
25.	Other diseases of digestive system.....	226	6.5
26.	Nephritis.....	274	7.9
27.	Other non-venereal—genito urinary system.....	47	1.4
28.	The puerperal state.....	31	.9
29.	Diseases of the skin and cellular tissue.....	10	.3
30.	Diseases of the bones and organs of locomotion.....	10	.3
31.	Malformations.....	36	1.0
32.	Early infancy.....	142	4.1
33.	Senility.....	31	.9
34.	Suicide.....	80	2.3
35.	Other external causes.....	276	7.9
36.	Ill defined and unknown.....	2	.1

BUREAU OF FOODS AND DRUGS.

REPORT FOR SEPTEMBER, 1921.

E. J. LEA, Director.

Two hundred twenty-one samples of foods, drugs and miscellaneous materials were received at the laboratory during the month of September.

Official		Unofficial.	
Beverages.....	2	Bread.....	1
Butter.....	1	Butter.....	1
Catsup.....	4	Catsup.....	11
Cheese.....	3	Cheese.....	3
Confectionery.....	3	Egg powder.....	1
Egg powder.....	3	Cake mixture.....	3
Feed.....	3	Expanso.....	1
Fish.....	4	Feed.....	9
Fruits.....	2	Fruits.....	3
Ice cream.....	2	Chili sauce.....	1
Jam.....	1	Fish.....	2
Macaroni.....	1	Ice cream.....	7
Meat.....	21	Milk.....	1
Milk.....	14	Macaroni.....	1
Mouldy food.....	1	Nuts.....	1
Rice.....	1	Potato flour.....	1
Syrup.....	2	Rice.....	4
Tomato products.....	3	Syrup.....	9
Vegetables.....	1	Tomato products.....	28
Vinegar.....	1		
Waffle batter.....	1		
	74		88
Miscellaneous.		State Institutions.	
Fuco morum.....	1	Butter.....	6
Soap liniment.....	1	Coffee.....	9
Citrate magnesia.....	4	Feed.....	7
	6	Flour.....	4
		Lard compound.....	1
		Syrup.....	3
		Tea.....	23
Total official.....	80		53

Total official samples.....	80
Total unofficial samples.....	88
Total institution samples.....	53
Total.....	221

CASES REFERRED TO DISTRICT ATTORNEY AT SEPTEMBER MEETING.

Material	Offense	Dealer	Locality
Apple juice and peach jam.....	Adulterated and mislabeled.....	Oest Fruit Company.....	San Francisco.
Camphorated oil.....	Adulterated and mislabeled.....	Stockton Drug Company.....	Stockton.
Cherry syrup.....	Adulterated and mislabeled.....	Sun Drug Company.....	Los Angeles.
Cherry syrup.....	Adulterated and mislabeled.....	Green Mill Sweet Shop.....	Los Angeles.
Cherry syrup.....	Adulterated and mislabeled.....	Lippen's Pharmacy.....	Los Angeles.
Cherry syrup.....	Adulterated and mislabeled.....	Archer Trank Soda Stand.....	Los Angeles.
Cherry syrup.....	Adulterated and mislabeled.....	Cromwell Confectionery.....	Hollywood.
Cherry syrup.....	Adulterated and mislabeled.....	A. R. Alfis.....	Los Angeles.
Cherry syrup.....	Adulterated and mislabeled.....	Stockton Drug Company.....	Stockton.
Chopped meat.....	Adulterated.....	College Avenue Market.....	Oakland.
Chopped meat.....	Adulterated.....	Hunter's Cash Market.....	Bakersfield.
Chopped meat.....	Adulterated.....	Little Premium Market.....	Glendale.
Cider vinegar.....	Adulterated and mislabeled.....	A. J. Moeller Company.....	San Francisco.
Citrate of magnesia.....	Adulterated.....	May Drug Company.....	Oakland.
Gelatine.....	Adulterated and mislabeled.....	Reine Company.....	San Francisco.
Gelatine.....	Adulterated and mislabeled.....	Reine Company.....	San Francisco.
Gelatine.....	Adulterated and mislabeled.....	Acme Supply Company.....	San Francisco.
Ginger ale.....	Adulterated and mislabeled.....	Excelsior Soda Works.....	Los Angeles.
Lemon soda.....	Adulterated and mislabeled.....	Independent Soda Works.....	Martinez.
Lemon syrup.....	Adulterated and mislabeled.....	South Hollywood Pharmacy.....	San Francisco.
Macaroni.....	Adulterated and mislabeled.....	Pacific Macaroni Company.....	Los Angeles.
Maple fudge.....	Adulterated and mislabeled.....	Quality Sweet Shop.....	Los Angeles.
Milk.....	Adulterated and mislabeled.....	Hotel Marin Cafe.....	San Rafael.
Noodles.....	Adulterated and mislabeled.....	Pacific Macaroni Company.....	Los Angeles.
Orange slides.....	Adulterated and mislabeled.....	B. J. Baum.....	San Francisco.
Orange syrup.....	Adulterated and mislabeled.....	Ingram Williams.....	Hollywood.
Orange syrup.....	Adulterated and mislabeled.....	Harry M. Horn.....	Hollywood.
Orange syrup.....	Adulterated and mislabeled.....	A. R. Alfis.....	Los Angeles.
Pure raspberry syrup.....	Adulterated and mislabeled.....	E. J. Weston.....	Los Angeles.
Raspberry syrup.....	Adulterated and mislabeled.....	California Wholesale Beverage Company.....	Los Angeles.
Raspberry syrup.....	Adulterated and mislabeled.....	J. A. Leeds.....	Los Angeles.
Strawberry syrup.....	Adulterated and mislabeled.....	S. J. Rishuain.....	Los Angeles.
Vanilla and strawberry ice cream brick.....	Adulterated.....	Miller Creamery Company.....	Oakland.
Vanilla ice cream.....	Adulterated.....	Miller Creamery Company.....	Oakland.
Vanilla ice cream.....	Adulterated.....	Miller Creamery Company.....	Oakland.
Whistle or orange soda.....	Adulterated and mislabeled.....	Independent Soda Works.....	San Francisco.
Wild cherry syrup.....	Adulterated and mislabeled.....	J. A. Leeds.....	Los Angeles.

CONVICTIONS UNDER FOODS AND DRUGS ACTS REPORTED DURING SEPTEMBER, 1921.

Name of article	Offense	Accused dealer	Locality	Result
Chopped meat and pork sausage.....	Adulterated.....	Lomita Meat Market.....	Lomita.....	Fined \$50.
Grape.....	Adulterated and mislabeled.....	Henry M. Lekas.....	Oakland.....	Fined \$25.
Manchurian walnuts.....	Adulterated and mislabeled.....	Fred C. Horst.....	Alameda.....	Fined \$20.
Manchurian walnuts.....	Adulterated and mislabeled.....	Henry M. Lekas.....	Oakland.....	Fined \$25.
Pure crushed orange.....	Adulterated and mislabeled.....	Chas. Bigley.....	San Jose.....	Fined \$10
Spring chickens.....	Adulterated and mislabeled.....	Quality Inn.....	Berkeley.....	Fined \$25.
Walnut meats.....	Adulterated and mislabeled.....	Fred Horst.....	Alameda.....	6 months probation.

ARTICLES OF FOOD CONDEMNED UPON PHYSICAL AND CHEMICAL EXAMINATION AS UNFIT FOR FOOD SEPTEMBER, 1921.

Material	Amount	Condition	Locality	Disposition
Apple juice.....	47 1-gal. jugs.....	Made from rotten apples.....	Berkeley.....	Dumped.
Armour's catsup.....	18 bottles.....	Unfit for human consumption.....	Oakland.....	Dumped.
Bacon.....	26 12-lb. tins.....	Decomposed.....	Oakland.....	Coal-oiled.
Bacon.....	3 6-lb. tins.....	Decomposed.....	Oakland.....	Coal-oiled.
Corned beef.....	1 6-lb. tin.....	Decomposed; swells.....	Oakland.....	Coal-oiled.
Corned beef.....	6 2-lb. tins.....	Decomposed; swells.....	Oakland.....	Coal-oiled.
Dried pears.....	3 tons.....	Mouldy and rotten.....	Hayward.....	Hog feed.
Evaporated apples.....	750 lbs.....	Mouldy.....	San Francisco.....	Hog feed.
Hair tonic "3 in 1".....	5,000 labels for.....	.....	San Francisco.....	Coal-oiled.
Holland herring (salt).....	6 bbls. (1,800 lbs.).....	Decomposed.....	Los Angeles.....	Dumped.
Jamaica ginger.....	3 doz. 2-oz. bottles.....	Adulterated.....	Stockton.....	Dumped.
Manchurian walnuts.....	40 lbs.....	Rancid.....	Alameda.....	Coal-oiled.
Roast beef.....	16 2-lb. tins.....	Decomposed.....	Oakland.....	Coal-oiled.
Tuna.....	26 tons.....	Decomposed.....	San Diego.....	Converted into fer-tilizer.
Walnuts.....	3,790 lbs.....	Decomposed and immature.....	San Francisco.....	Destroyed.
Walnuts (tropic).....	60 lbs.....	Rancid.....	Vallejo.....	Coal-oiled.
Walnuts.....	50 lbs.....	Wormy and rancid.....	San Francisco.....	Coal-oiled.

BUREAU OF SANITARY ENGINEERING.

REPORT FOR OCTOBER, 1921.

RALPH HILSCHER, Director.

The city of Sacramento, on December 21st, will vote on an additional bond issue of \$900,000 with which to complete the new water works and filtration plant. The original bond issue of \$1,800,000, voted in 1918, proved inadequate because of the great rise in construction costs that set in about that time.

The city of Lodi expects to make improvements in sewage disposal at an early date. At present the raw sewage is disposed of in an irrigating canal, part of the time without dilution, and a serious nuisance results.

Pomona is planning to build an activated sludge plant to treat a portion of its sewage. The present outfall sewer to the city farm has been outgrown. The new plant will treat the excess flow, which is to be diverted near town, the effluent being sold for irrigation.

Burbank voted bonds several months ago for a sewer system, but thus far has been unable to sell them.

The city of Petaluma is negotiating to buy the local water system. If this is done a filtration plant will probably be built.

The new activated sludge plant at Turlock during the past summer was required to handle a very large flow of cannery waste, in addition to the city sewage. The results during this period were very unsatisfactory. Since the cannery season ended the treatment has appeared to be adequate for local requirements. The quantity of air used in this plant is extremely low, being only about 0.3 cubic feet per gallon of sewage.

An Imhoff sewage tank will probably be built in the near future by the city of Taft.

Property owners in the vicinity of the Pasadena sewer farm recently petitioned the Los Angeles county supervisors to legislate against the erection of any sewage treatment works in the county within one mile of any city limits. No action has been taken. The petition was an outgrowth of a controversy of long standing between the cities of Pasadena, South Pasadena and Alhambra on one side and the city of Monterey Park on the other. It has been proposed to build an activated sludge plant on the Pasadena farm within a few hundred feet of dwellings in Monterey Park.

The city of Los Angeles recently undertook to enter into a contract for garbage disposal, which provided for feeding hogs within Los Angeles County. The city was to have received 90 cents per ton for the garbage. The County Supervisors, however, passed an ordinance prohibiting the maintenance of hog farms utilizing garbage as food within the county. The city then entered into a contract at 60 cents per ton with hog raisers operating in San Bernardino County, nearly 50 miles away. The garbage is hauled to the ranch by railroad.

The city engineer of Los Angeles has recommended the early construction of two activated sludge plants to treat a portion of the city's sewage so it can be discharged into convenient waterways near the city.

The outfall sewer to the ocean is already overloaded. Manholes overflow within the city and sewer connections are being added at the rate of nearly a thousand a month.

The beaches at Venice and Ventura were recently condemned for bathing on account of excessive sewage pollution.

SUMMARY OF BUREAU'S WORK FOR MONTH ENDING NOVEMBER 15, 1921.

Plans and reports received by the Bureau:

Plan of the Fullerton sewer farm.

Complaints received:

Ferndale, water supply.

San Diego, water supply derived from Lake Hodges.

Watsonville, sewage disposal.

San Bernardino, sewage disposal.

Berkeley, Y. M. C. A. swimming pool; sinus infections.

Inspections made:

Turlock, sewage treatment plant.

Yolo County Hospital, sewage treatment plant.

Ceres, sewage treatment plant.

Lodi, sewage treatment plant.

Napa, proposed tuberculosis preventorium, site for disposal.

Scotia, sewage disposal.

Arcata, sewage disposal.

Carlotta, sewage disposal.

Korbel, sewage disposal.

Bulwinkle, sewage disposal.

Los Angeles, inspection of proposed activated sludge treatment plant site on Ballona; also of several sewers now flowing full, in southwest portion of city.

Huntington Park, Hall & Dunham chemical plant, waste disposal.

Angeles Mesa Heights, sewage disposal into tributary of Ballona Creek.

Culver City, to determine character of moving picture waste.

Glendale, proposed site for high grade sewage treatment plant and land disposal.

Olive View Sanitarium, Los Angeles County, proposed site for Imhoff tank.

Venice, inspection of beach in vicinity of outfall sewer.

Burbank, in connection with sale of sewer bonds recently held to be illegal.

Beverly Hills, sprinkling filter, overloaded with increased sewage flow.

Oceanside, new ocean sewer outfall, under construction.

Chollas Heights Radio School, disposal of septic tank effluent.

Sweetwater High School, sewage disposal; recommended Imhoff tank with disposal on orchard land.

Laguna Beach, proposed sites for treatment plant, pumping plant and outfall.

Newport Beach, construction work on sewerage system.

Placentia, proposed methods of sewage disposal.

Fullerton, sewer farm. Possibilities for draining land to Coyote Creek were investigated.

Delhi, sugar refinery; waste disposal.

Venice, field tests to determine working chlorine dose for disinfection were made; probably 50 to 75 lb. per m.g. will be required.

La Habra and Coyote Creek, inspection of Coyote Creek in reference to sewage disposal of Mexican camp of the La Habra Citrus Association.

Los Angeles, water supply; inspection of Crystal Springs tunnel, chlorinator for surface water, High Line tunnel, wells and springs deriving water supply from Los Angeles River, and new pipe line being constructed from Crystal Springs to Buena Vista reservoir.

Oceanside, concerning proposed methods to adapt chlorination to pumps operated automatically by electric equipment.

San Diego, San Dieguito Mutual Water Company, a sanitary survey of the reservoir basin, San Dieguito Lake, Del Mar Reservoir, chlorinators at Del Mar and Torrey Pine reservoirs.

San Diego, inspection of Upper Otay, Lower Otay, Barrett and Morena reservoirs; also Harvey Diverting Dam, filter plant at Otay, Dulzura Creek and Chollas Heights reservoir.

Escondido, Escondido reservoir, city reservoir, and hypo-treatment plant.

National City, Sweetwater reservoir of Sweetwater Water Company.

Scotia, water supply.

Carlotta, water supply.
 Ferndale, water supply.
 Eureka, water supply.
 Napa, proposed tuberculosis preventorium, proposed water supply.
 Los Banos, water filter.
 Sacramento, water filtration plant under construction.
 Berkeley, Y. M. C. A. swimming pool.
 San Diego, Sixth Street Bath House; scum gutter has been installed and bacteriological sample shows favorable results.
 San Diego, Los Banos bath house; a large pressure filter has been installed.

Conferences:

Engineer of sewers and county health officer, Los Angeles, regarding critical situation caused by overflowing manholes in southwest part of city.
 With city council of Glendale, concerning possibilities of sewage disposal for entire city.
 With city trustees of Venice, to discuss sewage situation.
 With Los Angeles County Engineer, reviewing plans for Olive View Sanitarium Imhoff tank.
 With engineer, relative to Whittier sewage disposal.
 With attorney representing south section of Venice, regarding beach pollution.
 With Pacific Electric Company officials, regarding plans for sewage disposal at Mt. Lowe.
 With Association Sanitary Engineer of the U. S. Public Health Association, regarding certification of waters for interstate carriers, also sewage disposal at Sawtelle and sewage disposal at Los Collas Heights Radio Station.
 San Diego, with city officials, regarding development of additional water supply from the San Diego River.
 With superintendent of waterworks, Napa, regarding high salt content of water.
 With city engineer of Delano, regarding proposed sewer system.
 With representative of the Animal Industry Bureau, Department of Agriculture, regarding Los Angeles water supply.

Reports completed by Bureau:

On an investigation of the San Dieguito Mutual Water Company supply, San Diego.
 On the quarantine of bathing beach at Ventura.

Permit applications received:

Dinuba, to enlarge present water supply by drilling additional wells.
 Dinuba, to make sewer extensions.
 La Habra Citrus Association, sewage disposal.

Permits granted:

Madera, to continue to operate existing water works and construct a pumping plant.
 Ceres, to construct and operate a sewerage system and treatment plant.
 Santa Ana-Anaheim, a joint permit to construct an outfall to the ocean.
 Huntington Beach, to supply water from wells No. 7 and No. 8 and from well No. 6 in case of emergency.

MISCELLANEOUS.

Clams. Inspections of the following clam beds were made:

H. Mutzner, California City, Bay View and South San Francisco.
 Connell Bros., at Green Brea, Reeds, Strawberry, Bay View.
 H. Mein, at Bay View.
 Mahan Bros., at Bay Shore and Visitacion.
 Quong Sang, beds southwest of Pinole.
 Wing, near mouth of San Leandro Creek on San Leandro Bay.
 Also, clam beds in slough near Richmond and off shore from Pinole.

LABORATORY WORK.

Los Angeles Office:

Bacteriological examinations of water 95
 Chemical examinations of water (partial) 89

Berkeley Office:

Bacteriological examinations of water 265
 Chemical examinations of water (partial) 290
 Bacteriological examinations of sewage 3
 Total samples submitted 290

BUREAU OF CHILD HYGIENE.

REPORT FOR SEPTEMBER, 1921.

ETHEL M. WATTERS, M.D., Director.

Attended the San Joaquin County fair for three days, holding conferences in the morning and afternoon. Miss Platt, dental hygienist, also was busy at this fair. During the three days 83 children were examined. At Stockton Miss Ruth Bennett, Red Cross nurse of the northern district, and Miss Swoyer, Red Cross nurse of the southern district, were in charge of the booth. Mrs. Conzelmann, chairman of the Red Cross, and one of the most interested workers in Stockton, had a long conference with the director and she agrees concerning the advisability of holding conferences at fairs.

We met Miss Janet Roush, who has been appointed school nurse for Stockton.

Mendocino and Humboldt Counties.

On the 16th the staff of the Bureau traveled to Fort Bragg, accompanied by Miss Harriet Leete, the field director of the American Child Hygiene Association, who was particularly anxious to see the rural child hygiene work in this state.

Held a conference in Fort Bragg, on the 17th, under the auspices of the community nurse and the Sorosis Club. It rained the entire day and in spite of that there were 93 children who were examined at the conference. Miss Turner and the committee from the Sorosis Club had planned their publicity very carefully. They had used the newspapers, the moving pictures and the day before our coming had printed some dodgers, a copy of which is attached to this report.

The physicians of the town were interested in our work and Dr. Scudder attended the conference three or four times during the day. The ladies of the club provided refreshments for us and decorated their hall. Miss Turner saw that our rooms in the hotel were provided with beautiful sweet peas. The rare hospitality which was extended by the citizens of Fort Bragg was greatly appreciated. The local dairy distributed milk free, all day, to the children attending the conference and the local stores provided crackers so that those who waited would not get too hungry.

An amusing incident occurred at this conference when a three-year old girl walked up to a baby who was sucking his thumb, pulled the thumb out of his mouth and tasted it to see if he was eating something good.

The posters, which were made by the local high school children, found in almost every store which had arranged windows pertaining to child health, were excellent. We begged for them for our collection in the office. The success of this conference denoted a most interesting community spirit.

In the evening Miss Leete and Dr. Watters gave a talk at the local moving picture hall and afterward educational films were shown. Dr. Campbell, the local health officer, presided at the meeting. The result of the examinations of these 93 children will be filed here in the office.

On the 18th we were advised that there were three routes to Eureka from Fort Bragg and that the up-coast road had 30 per cent grades but it was in the best condition after the rain so that we started for Eureka by the up-coast road. The Ford went up the 30 per cent grades without difficulty but about half past six in the evening, with five gallons of gas in the tank, he settled his hind wheels in the clay and refused to go further. After an interview with the nearest individual, who proved to be an insane Italian, we decided to spend the night in the Ford. We were thoroughly wet in the endeavor to get the car out of the clay. Early next morning Miss Leete and Miss Clary walked to an Indian's, three miles from our enforced station, and secured his help. With the aid of his team he pulled us backward down the grade and started us over a round-about way which had fewer grades. We had no food for 36 hours and ate at the cookhouse of a shingle mill located at Needle Rock. The men were most cordial and we were able to fill our gasoline tank and satisfy our appetites.

We reached Myers Hotel, on the main highway, and spent the night. Arrived in Eureka on the 20th in time for our conference, which had been scheduled for weeks in advance. This conference was in charge of the Red Cross and the chairman of the Humboldt District Federation of Women's Clubs. We held a conference in Eureka for two days at the Red Cross rooms. There was some publicity given our coming and a great deal was said in the papers about our stay in Eureka. Dr. Lane, Dr. Marshall, Dr. Chain and Dr. Loofbourrow attended the conferences and aided us during the busiest hours. Every child who had no physical defects had his picture taken and the papers published these pictures. We examined, during the two days, 92 children.

On the 22d Miss Leete and Dr. Watters talked at the District W. C. T. U. meeting in Arcata in the afternoon; in the evening Miss Platt, Miss Leete and Dr. Watters talked to a group of nurses at the Red Cross rooms.

A conference was held at Arcata on October 23d at the fair. The space was entirely inadequate for our work and there was no provision made for the dental hygienist. We had 53 children here and the fair director was impressed with the examination of the youngsters. The Women's Club and the Red Cross and Miss Johnson, the Red Cross nurse, were interested in this examination and made the preliminary arrangements.

On the 24th we held a conference at the fair in Fortuna. We had two tents for our space and examined 95 children. Mr. Smith, one of the fair directors, was so pleased with the work that he promised us a pavilion next year with more space and more facilities for work. We examined 95 children here and one mother came 60 miles with her five children for the examination. One mother, who did not speak English, laughingly told us, through her interpreter, that she brought her five months' baby all the way from Sweden for the examination. Miss O'Shea and Miss Pottinger, the Red Cross nurses, aided us, as did also Mrs. Adams and Mrs. Smith.

The success of this conference was due to the fact that they canvassed the official records for children who were born during the past five years who were not found among the death certificates and notified their mothers to bring the children for examination. A local photographer,

with a keen eye for business, took the picture of every child who was examined after the examination was completed. There were posters and much publicity in the papers. The result of these 95 examinations will also be found in detail among our files.

The return to San Francisco was made in two days—the 25th and 26th.

We stopped in Ukiah over night and interviewed their new nurse, Miss Elizabeth Hodges, who is principally interested in teaching personal hygiene to the children in the grade schools and her greatest difficulty, at present, is the fact that she has no outlines for her various courses to cover the year's work of forty minutes a week to the different grades. Miss Hodges is to begin conferences for the children of the preschool age very soon and has chosen her building. Some time during the last week in February we are to hold, with Miss Greenhood's cooperation, a mouth hygiene and child hygiene week in Mendocino County, in cooperation with Miss Hodges and Miss Turner.

On this trip may we draw attention to the fact that, as usual, the staff of the Bureau worked Saturday afternoons and traveled Sundays and late in the evening in order to get from place to place. The follow-up work of these conferences is in the hands of the public health nurses who were instrumental in bringing us to their communities.

BUREAU OF REGISTRATION OF NURSES.

REPORT FOR SEPTEMBER, 1921.

ANNA C. JAMMÉ, R.N., Director.

The month of September showed a marked increase of students entering schools of nursing. During August and September five hundred five applicants met the requirements of the board and received their educational certification from the bureau; it is probable from the reports from the schools that these applicants found their way into some school and are well started on their training. Apparently there seems to be a renewed interest in nursing and by young women with definite purpose. If this is not discouraged by adverse publicity or other causes, we may confidently look forward to a new era in our schools of nursing.

Renewal of Registration Certificate.

The following is an extract from the law relating to the renewal of the registration certificate.

On and after January 1st of each year, each registered nurse shall renew his or her certificate and pay the required renewal fee of one dollar (\$1.00). Every certificate that is not renewed will expire on the first day of March of each year and may not be renewed except on the payment of lapsed fee.

Applications for renewal blanks may be forwarded to the Bureau. On receipt of the application and renewal fee, a card will be issued by the Bureau for the current year. This card will be small, can be carried in the purse and will serve as identification that the holder is a registered nurse. A complete list of all registered nurses will be published immediately after March 1st.

The following schools of nursing were inspected during August and September: Burnett Sanitarium, Fresno; Davern Hospital, Stockton; St. Josephs Hospital, Stockton; San Joaquin County Hospital, French Camp; Sierra Hospital, Sonora; Clara Barton Hospital, Los Angeles; St. Josephs Hospital, Eureka, has been approved by the State Board of Health as having sufficient facilities to conduct an accredited school of nursing.

At the regular meeting of the Board on September 3d, the following nurses were certified without examination under section 8, of the act: Helen Archibald, Soledad Abary, Louise Baalman, Clara M. Cramer, Ruth C. Hansen, Zillah Mathias, Letitia B. Mould, Beatrice Pendell, Isabella M. Rowan, Marjorie Sturgeon, Bessie E. Taylor, Pearl E. TenEyck.

LIST OF COUNTY AND CITY HEALTH OFFICERS.

Alameda County—

Dr. J. Hal Cope	Pleasanton
Alameda	Dr. A. Hieronymus
Albany	Dr. J. F. Diddle
Berkeley	Dr. Ernest H. Pape
Emeryville	Dr. A. T. Drennan
Hayward	Dr. F. W. Browning
Livermore	Dr. J. K. Warner
Oakland	Dr. H. E. Foster
Piedmont	Dr. Arthur Fibush
Pleasanton	Dr. J. Hal Cope
San Leandro	Dr. Luther Michael

Alpine County—

Markleeville

Amador County—

Dr. G. L. Lynch	Amador City
Amador City	W. T. Connors
Jackson	E. Marcucci
Plymouth	T. J. French
Sutter Creek	T. W. Trudgen

Butte County—

Dr. L. L. Thompson	Gridley
Biggs	Sarah J. Hlett
Chico	Chas. E. Toree
Gridley	Dr. L. Q. Thompson
Oroville	Dr. W. F. Gates

Calaveras County—

Dr. George F. Pache	Angels Camp
Angels Camp	Dr. E. W. Weirich

Colusa County—

Dr. G. W. Desrosier	Colusa
Colusa	Dr. G. W. Desrosier
Williams	Dr. N. M. Salter

Contra Costa County—

Dr. Chas. R. Blake	Richmond
Antioch	Dr. W. S. George
Concord	Dr. F. F. Neff
El Cerrito	Dr. W. W. Fraser
Hercules	Dr. M. L. Fernandez
Martinez	Dr. Edwin Merrithew
Pinole	Dr. M. L. Fernandez
Pittsburg	Dr. H. E. Peters
Richmond	Dr. Chas. R. Blake
Walnut Creek	Dr. C. R. Leech

Del Norte County—

Dr. E. M. Fine	Crescent City
Crescent City	Dr. E. M. Fine

El Dorado County—

Dr. S. H. Rantz	Placerville
Placerville	P. J. Hall

Fresno County—

Dr. G. L. Long	Fresno
Clovis	Dr. M. S. McMurtry
Coalinga	T. J. Peterson
Firebaugh	Thos. B. Gaines
Fowler	C. Chapman
Fresno	Dr. C. Mathewson
Kingsburg	Dr. T. D. Smith
Reedley	Dr. J. D. Hare
Sanger	Dr. A. E. Skoonberg
Selma	Dr. Fred H. Williams
San Joaquin	Dr. W. T. Goodrich

Glenn County—

Dr. F. M. Lawson	Willows
Orland	Dr. S. Iglick
Willows	Dr. J. L. Rawhauser

Humboldt County—

Dr. F. R. Horel	Arcata
Arcata	Dr. G. W. McKinnon
Blue Lake	Dr. Earl W. Hill
Eureka	Dr. John N. Chain
Ferndale	Francis M. Bruner
Fortuna	Dr. Orville Rockwell

Imperial County—

Dr. L. C. House	El Centro
Brawley	Dr. Eugene Le Baron
Calexico	Dr. P. N. Sims
Calipatria	Dr. L. L. Lindsay
El Centro	Dr. F. A. Burger
Holtville	C. L. Gillett
Imperial	R. O. Thompson

Inyo County—

Dr. Harrey W. Crook	Big Pine
Bishop	D. M. Nicoll

Kern County—

Dr. S. C. Long	Bakersfield
Bakersfield	Dr. P. J. Cuneo
Delano	A. Ackerman
Maricopa	Dr. D. W. Sooy
McKittrick	Dr. Degnan
Taft	Dr. M. W. Pascoe
Tehachapi	Dr. John T. Bernard

Kings County—

Dr. W. F. Edmonds	Lemoore
Corcoran	Dr. J. T. Gardner
Hanford	Dr. A. S. Torrens
Lemoore	Dr. W. F. Edmonds

Lake County—

Dr. H. B. Weiper	Lower Lake
Lakeport	P. H. Millberry

Lassen County—

Dr. W. E. Dozier	Susanville
Susanville	Dr. W. C. Garner

Los Angeles County—

Dr. J. L. Pomeroy	Los Angeles
Alhambra	Dr. F. E. Corey
Arcadia	Dr. Fletcher G. Sanborn
Avalon	Dr. Jas. L. Chapman
Azusa	W. I. Hamblin
Beverly Hills	Dr. Chas. F. Nelson
Burbank	Dr. J. N. Van Meter
Claremont	F. H. Geer
Compton	A. C. Cooney
Covina	Dr. J. A. Lepley
Culver City	Dr. Foster M. Hull
Eagle Rock	Dr. C. H. Phinney
El Monte	Dr. B. B. Bolton
El Segundo	Harold A. Young
Glendale	Dr. J. E. Eckles
Glendora	Dr. J. L. Pomeroy
Hermosa Beach	B. F. Brown
Huntington Park	Dr. Thos. J. DeVaughn
Hyde Park	Dr. C. R. Gailmard
Inglewood	Dr. Frank Rainie
La Verne	Dr. J. E. Hubble
Long Beach	Dr. G. E. McDonald
Los Angeles	Dr. L. M. Powers
Manhattan Beach	Llewellyn Price
Monrovia	Dr. Chas. D. Gaylord
Monterey Park	Dr. N. J. Brown
Pasadena	Dr. F. W. Hodgdon, Jr.
Pomona	Dr. W. H. Eaton
Redondo Beach	Dr. A. C. Hendree
San Fernando	Dr. John M. Griffiths
San Gabriel	Fred Daken
San Marino	Dr. Ruth Purcell
Santa Monica	Dr. W. A. Hodgkinson
Sierra Madre	Dr. R. H. Mackerras
South Pasadena	Dr. J. R. Reid
Torrance	Dr. J. S. Lancaster
Venice	Dr. I. L. Magee
Vernon	Dr. L. J. Williams
Watts	Dr. E. J. Riche
Whittier	J. C. Warner

Madera County—

Dr. C. A. Robinson	Madera
Madera	Dr. C. A. Robinson

Marin County—

Dr. J. H. Kuser	Novato
Belvedere	Dr. Florence Scott
Corte Madera	A. F. Roberts
Larkspur	Dr. L. Newman
Mill Valley	Theodore B. Thorndike
Ross	Dr. Thos. U. Smith
San Anselmo	Dr. O. W. Jones
San Rafael	Dr. W. F. Jones
Sausalito	Dr. Allan H. Vance

Mariposa County—

Dr. C. S. Scott	Mariposa
Yosemite	Dr. F. L. Stein

Mendocino County—

Dr. S. L. Rea	Ukiah
Fort Bragg	Dr. F. Mcl. Campbell
Point Arena	Dr. A. D. Pitts
Potter Valley	Grover King
Ukiah	Dr. Lew K. Van Allen
Willits	Dr. Ernest C. Griner

Merced County—

Dr. J. L. Mudd	Merced
Gustine	Dr. C. E. Stagner
Los Banos	Steven P. Galvin
Merced	Dr. Brett Davis

Modoc County—

Dr. W. E. Coppedge	Alturas
Alturas	Dr. John Stille

Mono County—

Bridgeport

Monterey County—

Dr. J. A. Beck	Salinas
Carmel-by-the-Sea	George Dorwart
King City	Mrs. R. H. Brunette
Monterey	Mary C. B. Hageman
Pacific Grove	James P. Evans
Salinas	S. F. Butle

Napa County—

Dr. O. T. Schulze	Napa
Calistoga	A. W. Ahm
Napa	C. C. Hackett
St. Helena	M. P. Guyon

Nevada County—

Dr. Carl P. Jones	Grass Valley
Grass Valley	Dr. Paul D. Barnes
Nevada City	Geo. H. Calanan

LIST OF COUNTY AND CITY HEALTH OFFICERS—Continued.

Orange County—

Dr. Arthur H. Domann.....	Orange
Anaheim.....	Dr. J. W. Truxaw
Brea.....	Dr. O. S. Parrett
Fullerton.....	Dr. J. H. Lang
Huntington Beach.....	John Tinsley
Newport Beach.....	J. A. Porter
Orange.....	Dr. F. L. Chapline
Santa Ana.....	Dr. J. I. Clark
Seal Beach.....	Holm Holson
Stanton.....	T. W. Clark

Placer County—

Dr. J. L. Fanning.....	Roseville
Auburn.....	Dr. Theodore Snyppe
Colfax.....	Dr. Charles J. Durand
Lincoln.....	F. R. Elder
Rocklin.....	John H. Gregory
Roseville.....	Dr. J. L. Fanning

Plumas County—

Dr. B. J. Laswell.....	Quincy
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Riverside County—

Dr. James G. Baird.....	Riverside
Banning.....	Mrs. J. H. Dodge
Beaumont.....	T. F. Ankeny
Blythe.....	Dr. W. H. Chapman
Corona.....	Dr. C. E. Shank
Elsinore.....	Dr. P. J. Parker
Hemet.....	Dr. J. A. Ramsay
Perris.....	Dr. D. W. Sheldon
Riverside.....	Dr. W. B. Wells
San Jacinto.....	Dr. H. O. Miller

Sacramento County—

Dr. James T. Christian.....	Galt
Sacramento.....	Dr. George J. Hall

San Benito County—

Dr. R. W. O'Banion.....	Hollister
Hollister.....	Fred A. Earle
San Juan.....	W. S. Hayden

San Bernardino County—

Dr. W. D. Lenker.....	San Bernardino
Chino.....	Dr. Elgar Reed
Colton.....	Dr. C. F. Whitmer
Needles.....	Dr. V. C. Charlston
Ontario.....	Dr. S. P. S. Edwards
Redlands.....	Dr. Kenneth L. Dole
Rialto.....	Dr. L. P. Barbour
San Bernardino.....	Dr. C. C. Owen
Upland.....	E. R. Bowman

San Diego County—

Dr. Louis Strahlman.....	San Diego
Chula Vista.....	Dr. F. E. Ashcroft
Coronado.....	Dr. Raffael Lorini
East San Diego.....	Dr. C. R. Carpenter
El Cajon.....	Barlow Call
Escondido.....	Dr. B. L. Crise
La Mesa.....	Dr. J. C. Young
National City.....	Dr. Theo. F. Johnson
Oceanside.....	Dr. H. F. Crandall
San Diego.....	Dr. A. M. Lesem

San Francisco (city and county)—

Dr. W. C. Hassler.....	San Francisco
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San Joaquin County—

Dr. Irving S. Zeimer.....	Stockton
Lodi.....	Dr. S. W. Hopkins
Manteca.....	F. M. Roundtree
Stockton.....	Dr. Nathan Sinai
Tracy.....	Dr. Allen R. Powers

San Luis Obispo County—

Dr. O. B. Fossum.....	San Luis Obispo
Arroyo Grande.....	Dr. S. E. Chapman
Paso Robles.....	Wm. Ityan
San Luis Obispo.....	W. F. Cook

San Mateo County—

Dr. F. Holmer Smith.....	San Bruno
Burlingame.....	Lewis A. Cavalier
Colma.....	Dr. F. Holmes Smith
Daly City.....	Dr. A. H. Rankin
Hillsborough.....	C. M. Hirschey
Redwood City.....	Dr. J. E. Chapin
San Bruno.....	Dr. F. Holmes Smith
San Mateo.....	Dr. W. C. McLean
So. San Francisco.....	Dr. J. C. McGovern

Santa Barbara County—

Dr. G. S. Loveren.....	Santa Barbara
Guadalupe.....	Dr. W. D. Sink
Lompoc.....	Dr. W. T. Talbott
Santa Barbara.....	Dr. A. L. O'Bannon
Santa Maria.....	Dr. W. T. Lucas

Santa Cruz County—

Dr. Wm. H. Keck.....	Santa Cruz
Santa Cruz.....	Dr. W. R. Congdon
Watsonville.....	Dr. A. W. Bixby

Santa Clara County—

Dr. Wm. Simpson.....	San Jose
Alviso.....	Miss A. E. Ortle
Gilroy.....	Dr. J. W. Thayer
Los Gatos.....	Dr. Blake Franklin
Mayfield.....	Mrs. Elsie G. Roberts
Morgan Hill.....	Dr. W. D. Miner
Mountain View.....	Dr. A. H. MacFarlane
Palo Alto.....	Louis Olson
San Jose.....	Dr. H. C. Brown
Santa Clara.....	Dr. G. W. Fowler
Sunnyvale.....	M. J. McGlinnes

Shasta County—

Dr. S. T. White.....	Redding
Kennett.....	Dr. C. H. Haake
Redding.....	E. A. Rollson

Sierra County—

Dr. O. A. Eckhardt.....	Downsville
Loyalton.....	L. G. Ede

Siskiyou County—

Dr. H. S. Warren.....	Yreka
Dorris.....	Dr. A. A. Atkinson
Dunsmuir.....	E. M. Akers
Etna.....	Dr. W. H. Haines
Fort Jones.....	T. J. Wayne
Montague.....	Hugh W. French
Sisson.....	Dr. Paul Wright
Yreka.....	Dr. H. S. Warren

Solano County—

Dr. W. C. Jenney.....	Vacaville
Benicia.....	Dr. P. B. Fry
Dixon.....	H. G. Grove
Fairfield.....	Dr. H. V. Clymer
Rio Vista.....	L. H. Church
Suisun.....	Dr. A. G. Bailey
Vacaville.....	W. F. Hughes
Vallejo.....	Dr. E. A. Peterson

Sonoma County—

Dr. F. O. Pryor.....	Santa Rosa
Cloverdale.....	E. E. Gibbins
Healdsburg.....	Dr. J. W. Seawell
Petaluma.....	Dr. Henry S. Rogers
Santa Rosa.....	Dr. Jackson Temple
Sebastopol.....	Dr. Lafayette Wilson
Sonoma.....	J. H. Albertson

Stanislaus County—

Dr. J. L. Hennemuth.....	Modesto
Ceres.....	Albert Rich
Modesto.....	Dr. J. W. Morgan
Newman.....	Dr. H. V. Armistead
Oakdale.....	R. L. Acker
Patterson.....	Dr. K. Hurst
Turlock.....	Dr. C. E. Pearson

Sutter County—

Dr. W. L. Stephens.....	Meridian
Yuba City.....	Dr. J. H. Barr

Tehama County—

Dr. J. A. Owens, Jr.....	Red Bluff
Corning.....	Dr. Caroline Howes
Red Bluff.....	Dr. F. J. Bailey
Tehama.....	Dr. J. H. Belyea

Trinity County—

Dr. David B. Fields.....	Weaverville
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Tulare County—

Dr. A. W. Preston.....	Visalia
Dinuba.....	Dr. C. A. Tillotson
Exeter.....	Dr. W. R. Tyler
Lindsay.....	Dr. C. W. Locke
Porterville.....	Dr. O. C. Higgins
Tulare.....	Dr. J. B. Ross
Visalia.....	Dr. A. W. Preston

Tuolumne County—

Dr. Wm. L. Hood.....	Sonora
Sonora.....	Dr. Wm. L. Hood

Ventura County—

Dr. A. A. Maulhardt.....	Oxnard
Fillmore.....	Dr. Harold B. Osborn
Oxnard.....	Dr. G. A. Broughton
Santa Paula.....	Dr. John Crawford
Ventura.....	L. M. Wilson

Yolo County—

Dr. Chas. E. Beebe.....	Woodland
Davis.....	Dr. W. E. Bates
Winters.....	Geo. R. Sidwell
Woodland.....	Dr. W. J. Blevins

Yuba County—

Dr. J. H. Barr.....	Marysville
Marysville.....	Dr. Fred Tapley
Wheatland.....	W. H. Niemeyer

List of Diseases Reportable by Law

ANTHRAX	OPHTHALMIA NEONATORUM
BERI-BERI	PARATYPHOID FEVER
CEREBROSPINAL MENINGITIS	PELLAGRA
(Epidemic)	PLAGUE
CHICKENPOX	PNEUMONIA (Lobar)
CHOLERA, ASIATIC	POLIOMYELITIS
DENGUE	RABIES
DIPHTHERIA	ROCKY MOUNTAIN SPOTTED
DYSENTERY	(or Tick) FEVER
ENCEPHALITIS (Epidemic)	SCARLET FEVER
ERYSIPELAS	SMALLPOX
GERMAN MEASLES	* SYPHILIS
GLANDERS	TETANUS
* GONOCOCCUS INFECTION	TRACHOMA
HOOKWORM	TUBERCULOSIS
INFLUENZA	TYPHOID FEVER
LEPROSY	TYPHUS FEVER
MALARIA	WHOOPING COUGH
MEASLES	YELLOW FEVER
MUMPS	

* Reported by office number. Name and address not required.

Quarantinable Diseases

CEREBROSPINAL MENINGITIS	POLIOMYELITIS
(Epidemic)	SCARLET FEVER
CHOLERA, ASIATIC	SMALLPOX
DIPHTHERIA	TYPHOID FEVER
LEPROSY	TYPHUS FEVER
PLAGUE	YELLOW FEVER

Section 16, Public Health Act. All physicians, nurses, clergymen, attendants, owners, proprietors, managers, employees, and persons living in or visiting any sick person in any hotel, lodging house, house, building, office, structure, or other place where any person shall be ill of any infectious, contagious, or communicable disease, shall promptly report such fact to the county, city and county, city, or other local health board or health officer, together with the name of the person, if known, and place where such person is confined, and nature of the disease, if known.



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